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PREFACE

This Planning Area Analysis is the first such document prepared in the State of Nevada. It is intended to serve as a prototype for other resource areas throughout the State of Nevada.

This document is one of the major steps in the preparation of a management framework plan for the Tonopah Resource Area. The management framework plan will be used in the preparation of grazing allotment management plans, wildlife habitat management plans, and other resource management plans.

In addition, this management framework plan will be used in the preparation of an environmental impact statement on the effect of grazing in the Tonopah Resource Area.

All comments and suggestions pertaining to this document should be addressed to:

The Bureau of Land Management
Battle Mountain District
Second and Scott Streets
Battle Mountain, Nevada 89820

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1607 - PLANNING AREA ANALYSIS
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BUREAU OF LAND MANAGEMENT
NEVADA STATE OFFICE
DISTRICT BOUNDARIES
OCT. 1975

Map 1

PLANNING AREA ANALYSIS

.1 Introduction

The Planning Area Analysis (PAA) is intended to serve as a method of analyzing and displaying the relationship between social and economic facts developed in the Social-Economic Profile to the physical and biologic data of the Unit Resource Analysis for the planning area. The data is analyzed from an economic and a social viewpoint to determine the relative significance of each resource activity and its importance to the local and national communities. The Planning Area Analysis also uses data developed in the Socio-Economic Profile in order to further examine the human parameters of the environment. Bureau relationships, critical environment areas, and significant problems and issues are summarized at the end of the Planning Area Analysis.

Each resource activity was analyzed for significance in terms of production, employment, and income generated from a local, regional, and national viewpoint. In addition, cultural values were identified through interviews and records of participation in public meetings and questionnaires. Social well-being was examined in comparison to the State's well-being indicators.

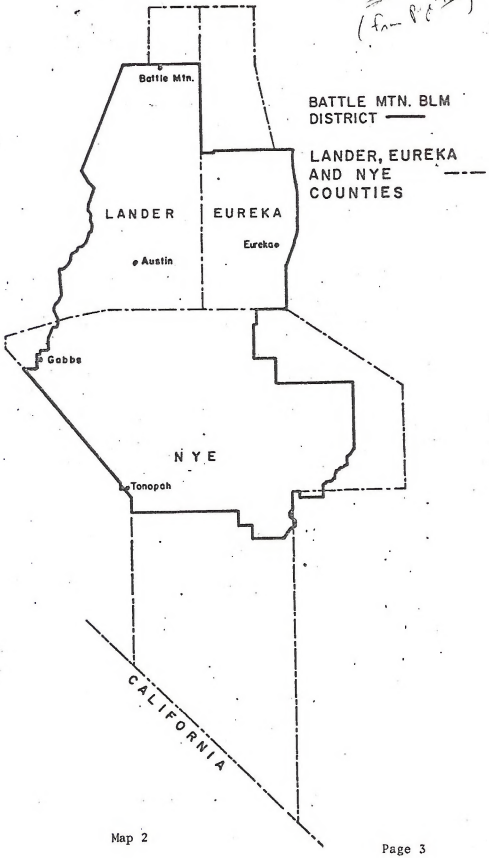
This document should be viewed as a part of a total planning process. The final goal is a Management Framework Plan (MFP).

One basic repository of data is the Unit Resource Analysis (URA) which is prepared as an inventory of resource data in map overlay and narrative form. A second basic information document is the Socio-Economic Profile (SEP) which is prepared for the whole Bureau of Land Management district. This SEP provides social, cultural, and economic data about the BLM district on a county-by-county base. The Planning Area Analysis (PAA) serves to analyze the physical resources within the resource area in light of the human environment.

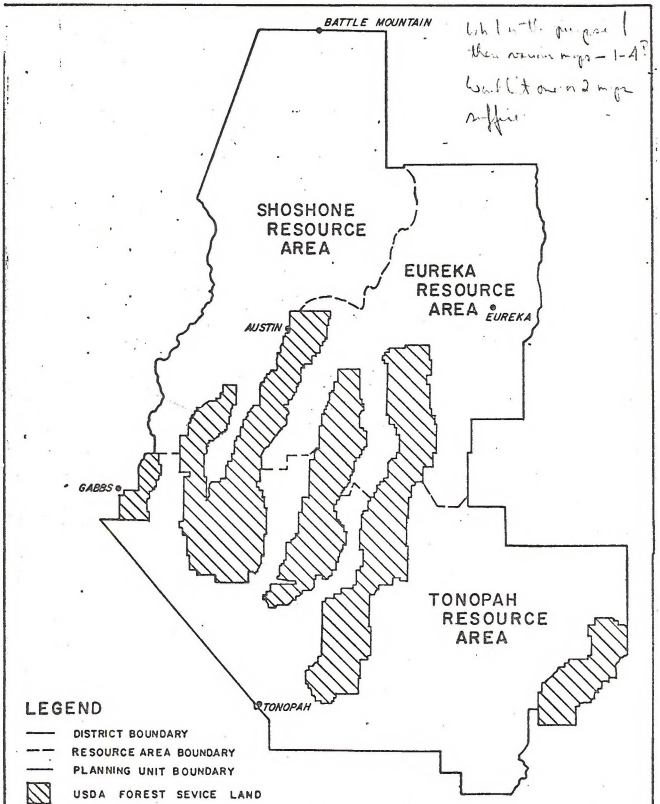
A Management Framework Plan is then developed from the URA and PAA. This MFP, after final public and official approval, will serve as a master plan for land management in the resource area for the next few years.

The Planning Area Analysis should serve as an indicator of the present impact of management, provide a basis for estimating impact due to change, and specify future demands and public desires. Finally, the Planning Area Analysis should serve as a transition from the URA to the Management Framework Plan, especially Steps 1 and 2, which display objectives, rationale, and management decisions.

MAP 2


Battle Mtn.
BATTLE MTN. BLM DISTRICT
LANDER, EUREKA AND NYE COUNTIES
LANDER
EUREKA
Austin
Eureka
Gabbs
NYE
Tonopah
CALIFORNIA

Map 2



BATTLE MOUNTAIN DISTRICT

Map 3

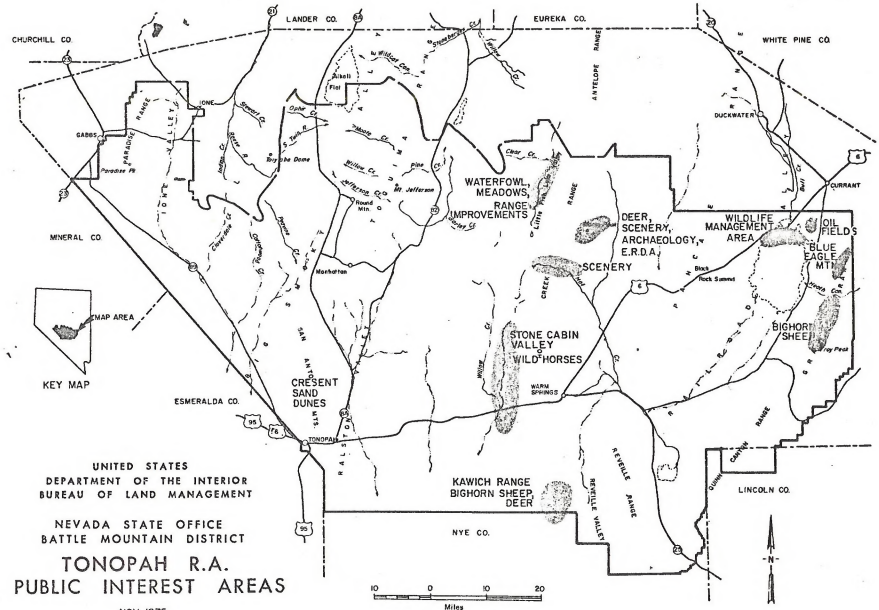
.2 Social Economic Analysis and Economic Demand Projections

This section is subheaded under Resource Activities:

.21 Lands
.22 Minerals
.23 Forest Products
.24 Range
.25 Watershed - Reserved
.26 Wildlife
.27 Recreation

Watershed is reserved because the Bureau of Land Management has not as yet adopted procedures for indicating significance and community impact of watershed management (such as forage benefits, erosion control, stream control, etc.).

All the other resources are analyzed according to production, income, employment, and population. BLM resources are analyzed for significance and projected future demand. Where current or future use is considered significant, additional analysis of the demand for goods and services is prepared.



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NEVADA STATE OFFICE
BATTLE MOUNTAIN DISTRICT

TONOPAH R.A.
PUBLIC INTEREST AREAS

NOV. 1975

Map 4

.21 Lands

A. Required Analysis*

Urban-Suburban Land Use: Private lands in the vicinity of Tonopah and Round Mountain total 4,160 acres. However, most of this is in the form of patented mining claim lands. From aerial photographs, it has been determined that there are approximately 457 acres under urban-suburban use in the townsites of Tonopah, Round Mountain, Manhattan, and Ione. However, Manhattan and Ione townsites are on national resource lands at the present time. These are being considered for townsite applications and transfer.

Agricultural Land Use: There are approximately 50.6 sections (32,440 acres) of private farm and grazing land in the Tonopah Resource Area. This includes ranching base property and land used to raise hay, alfalfa, etc.

Utility Systems Land Use: Utility systems comprise approximately 350 miles of linear rights-of-way across national resource lands. These uses are broken down as follows:

Power transmission	289 miles
Communication	30 miles
Water line	22 miles
Total	350 miles of right-of-way

A right-of-way is defined as a path which is legally designated for the use of the power, communication, or water line.

Other Land Uses: Other land uses include six unauthorized dump sites which are being considered for transfer to Nye County under the Recreation and Public Purposes Act. There are five communication sites; 2,560 acres are withdrawn for the Energy Research and Development (ERDA) Hot Creek Atomic Test Site and 14,720 acres are withdrawn for wildlife use by the Fish and Wildlife Service in Railroad Valley.

Non-Classified Land Uses: There are 293,247 acres of land in the resource area that are unclassified. These lands were withdrawn from multiple use for livestock driveways during the time when lands were being classified under the Classification and Multiple Use Act. The withdrawal has since been restored, but the lands have not been reclassified.

The Desert Land Entry procedures are similar to homesteading. The BLM has accepted no new land applications since 1964. Desert land actions were suspended pending an assessment of the ground water availability by the State of Nevada. The study is, at present, nearly complete. The BLM is conducting a study to determine areas where there is agriculture potential and the method by which the land can be opened for entry.

*Information from URA Lands overlay.

The present Desert Land Entry Act may or may not be suitable for transferring potential farm land to private ownership in this area.

Regional Trends: U. S. Census figures in 1970 placed the Las Vegas population at 276,474*. The projected population for the Las Vegas area is 408,158 by 1980. This will be an increase of 131,684 (47.7 percent).

In 1970, Nye County had a population of 5,599. The projected population for 1980 is 7,028, an expected increase of 1,429 (20 percent). (Nye County could probably expect an equivalent increase in demand for rights-of-way, recreation, etc.).

There are three major projects proposed for the area: the Navy communication project "Seafarer", an underground network of antenna cables; the Intermountain Power project, a proposed high voltage cross-country power transmission line, and the Alaska Natural Gas Transmission System, an underground pipeline proposed as part of a network to carry natural gas from Alaska to Los Angeles.

B. Significance

The following table is a list of the number of the people employed in "Lands Related" economic sectors within the planning area. These figures were taken from the District Socio-Economic Profile.

The percentages do not add up to 100 percent under employment or income because the minerals sector is analyzed under another activity (.22 Minerals).

* Economic Profile Supplement, Battle Mountain District, June 1974.

Table 1

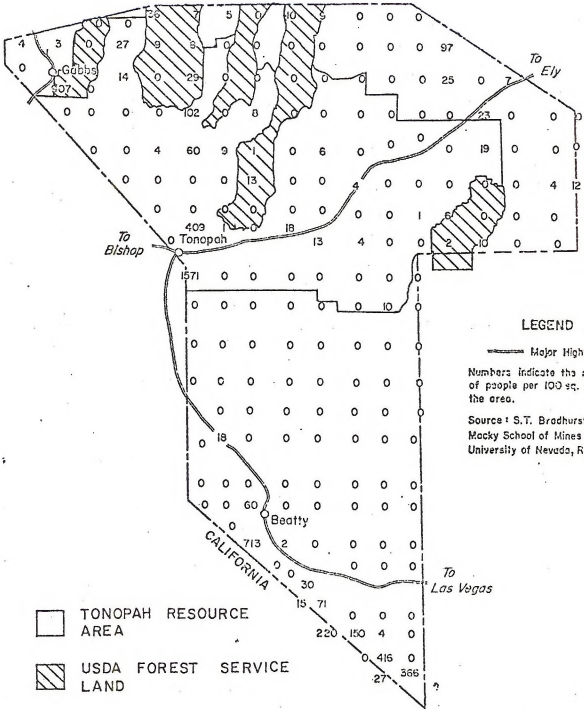
Land Use Related Employment (1970)
and
Income (1972) in the Tonopah Resource Area

	Employment		Income	
	Persons	Percent	Thousands of Dollars	Percent
a. Urban and Suburban Lands (4,160 acres)	735	49	7,075 (at least)	57
1. Construction	121	8	540	4
2. Manufacturing	19	1	31	1
3. Wholesale and Retail Trade	237	16	1,340	11
4. Finance, Insurance and Real Estate	withheld	8	(not available)	
5. Services	70	5	1,749	14
6. Government	170	11	3,416	27
b. Agricultural Lands (32,440 acres deeded land)				
1. Agriculture	58	4	196	2
c. Utility (350 miles of rights-of-way)				
1. Transportation, Communication and Public Utilities	77	5	624	5
TOTAL	1,493	-	12,582	-

d. Public Purpose Areas

ERDA Hot Creek Test Site - 2,560 acres.
Fish and Wildlife Management Area - 14,720.

These areas have potential to generate employment. However, at present, the Hot Creek Test Site is shutdown, and the wildlife management area is in relatively undeveloped state. No development plans are available for either of these areas.



1970 POPULATION DISTRIBUTION, NYE COUNTY

C. Additional Analysis

Population Effect - Economic Demand Projections: The population density of the urban areas in the planning area is estimated to be 99.6 people per square mile for a total urban population of 1,992. The rural population is estimated to be 0.45 people per square mile for a total rural population of 324. The population/employment ratio for Nye County is 2.5. This figure means there are 2.5 people supported by each person who is employed and lives in Nye County. (A large portion of the work force in Nye County lives outside the county, mainly the Mercury Test Site force.)

Local Demand Analysis:

Urban and Suburban: The population of the Tonopah Resource Area is projected to increase by 49 percent between now and 1990*. Using this figure, the population in 1990 will increase to approximately 4,200. The urban population density at present is 6.1 people per acre. With a projected population of 4,200, and the existing population density of 6.1 people per acre in urban areas, the urban area needed in 1990 will be 688 acres. The urban area at present is about 457 acres. However, much of the private land near the urban centers is undeveloped and it is possible that much of the projected population increase can be accommodated on available private lands.

Another factor to consider is the variation of the population trend. During the period between 1960 and 1970, the population increased 28 percent. However, during the period between 1970 and 1975, the population actually dropped. Much of this fluctuation in population trend is the result of building up and closing down of operations on the ERDA Nevada test site. The Nevada test site has a dramatic influence on the population in the resource area. Unfortunately, there are no projections as to what level test site operations will be at in 1990.

Recreation and Public Purpose Areas: The demand for public purpose areas can usually be correlated with the increase in population. At present, there are three Recreation and Public Purpose areas in the resource area. These consist of the recreation site at Carver's Station on Highway 80, near Round Mountain, the Nye County pistol range, and the Nye County Hospital site in Tonopah. Another possible R&PP site is the Tonopah dump. Therefore, it appears the demand for R&PP areas by 1990 should be no greater than 11 (4 at present, 5 more possible dumps, and 2 more recreation sites to correspond with the 28 percent increase in population). If the potential farm land in the planning unit is developed, there will be some additional demand for rural public purpose areas.

Agricultural Lands: The planning unit has approximately 529,800 acres of agriculturally valuable soils. The Nevada State Engineer's report, "Water for Nevada", estimates that there are 86,600 acre/feet of sub-surface water available annually. However, much of the water is available

* Bureau of Business and Economic Research, University of Nevada, 1974.

in valleys where there are few acres of suitable agricultural land. When the combination of suitable soil and available water is worked out for the resource area, it results in a total of 23,045 acres of suitable agricultural land available for development based upon water use at the rate of 1.7 feet per acre. It is highly possible this land will be developed and placed into production before 1990. If this land is developed, there will be an increase in the population of the planning unit.

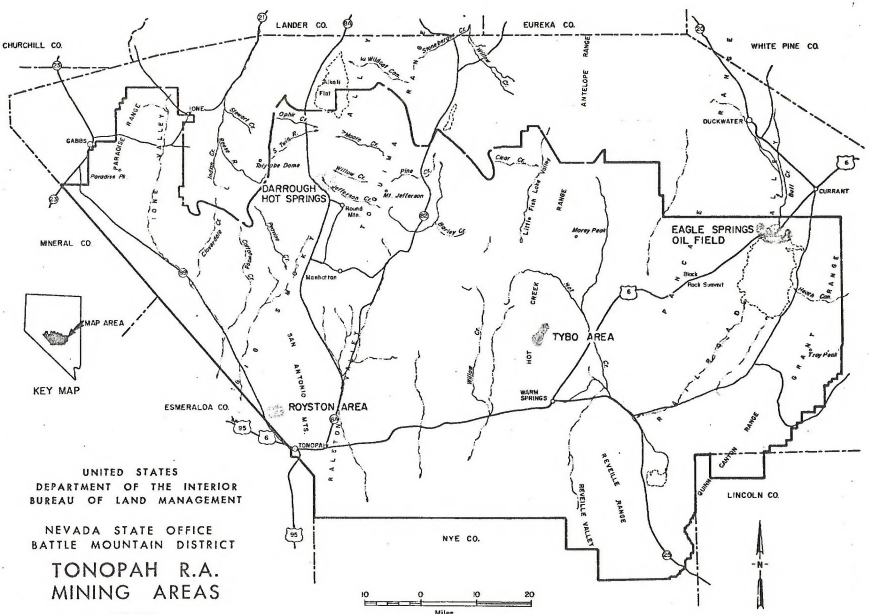
According to the 1969 Census of Agriculture*, the average farm in Nye County had 284 acres of cropland and employed 2.88 workers who worked more than 150 days per year.

These figures, when applied to the 23,045 acres determined to be suitable for agriculture, result in the following estimates:

Potential Farms - 81
Potential Farm Workers - 233
Potential Farm Operators - 81

Given the population/employment ratio of 2.7, it is possible that the potential farm development could result in an increase in population of 848 people. This figure could be greater when employment in farm support industry and business is considered.

*Bureau of the Census, Volume I Area Report, Part 4-5, Nevada.



UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NEVADA STATE OFFICE
BATTLE MOUNTAIN DISTRICT

TONOPAH R.A. MINING AREAS

NOV. 1975

Map 6

.22 Minerals

A. Role of BLM in Administration or Development of Mineral Lands within the Tonopah Resource Area

Leasable Minerals (Gas, Oil, etc.): BLM leases oil and geothermal lands in the resource area. Geothermal lands are not yet productive. Potentially valuable oil and geothermal lands make up a large part of the resource area (over 50 percent); however, only a small percentage of these lands will actually be explored and an even smaller percentage will be productive (due to technical and economic restraints). BLM takes an active role in terms of offering lands for leasing. This role involves timely processing of applications for leases and rights-of-way. A negative role is also possible, involving closing lands to all mineral entry. Such closure is justified only in extreme situations where impacts on other values, such as wildlife or recreation, could not be mitigated if development occurs.

Locatable Minerals (Gold, Barite, etc.): Most of the known reserves of locatable minerals in the resource area are on patented land. Potentially valuable mineral areas cover a substantial acreage of national resource lands. However, only a small percentage of these lands will ever be mined due to technical and economic constraints. Where valuable minerals exist, only rarely can the lands be considered more valuable for other purposes. The BLM's role as regards locatable minerals is non-restrictive. Under the current mining laws, BLM has little or no control over surface use of national resource lands by mining companies during prospecting, exploration, or development. This lack of control has sometimes resulted in extreme negative action by the Bureau and other agencies; i.e., withdrawal of land from all mineral entry, as the only defense against adverse environmental impacts.

Saleable Minerals (Sand, Gravel, etc.): The Bureau has complete control over disposition of saleable minerals to individuals, companies, or agencies and can control surface use during excavation. The Bureau may encourage responsible and efficient extraction of sand and gravel by setting up community pits.

B. Significance of Commodities within the Resource Area and Projections for the Future

Significant commodities are those that satisfy a reasonable percentage of demand in the market area for that commodity. In the resource area, only barite and turquoise are currently significant. Gold and silver have potential for significance.

Petroleum production within the resource area is not regionally significant; it accounts for only a miniscule part of the U.S. production and holds little promise for increase. Oil from the Eagle Springs field in East Nye County is shipped to Pocatello, Idaho; Bakersfield, California; and McGill, Nevada. As a revenue producer, however, oil is important to the resource area.

Table 2

MINERAL PRODUCTION AND RESERVES BY COMMODITY
TONOPAH RESOURCE AREA

COMMODITY	PRODUCTION		RESERVES				NOTES
					ACRES		
	TOTAL	ON NRL	TOTAL	ON NRL	TOTAL	NRL	
Leaseable Oil	150,000 bbls (1975 est.)	100%	Unknown		320 (est.)	100%	Eagle Springs oil field.
Geothermal Steam	None		Unknown		640 (est.)	75% (est.)	Darrough Hot Springs.
Coal	None		Unknown		Unknown		No development likely.
Locatable Gold	None 1/		Unknown	30%	10,000 (est.)	3,000 (est.)	Round Mountain, Manhattan Reserves based on company estimates.
Silver-Lead	None		Unknown	0%	250 (est.)	0%	Tybo Reserves computed from company estimates of ore tenor daily production and duration of operation.
Copper	None		50,000,000 lbs. (est.)	20% (est.)	2,000 (est.)	400 (est.)	Anaconda, Hall property.
Barite 2/	100,000 tons (1975 est.)	0%	Unknown	0%	Unknown	0%	
Turquoise	Unknown		Unknown		500 (est.)	Unknown	Royston Area.
Saleable Sand and Gravel	Unknown	100%	Unknown		Unknown		Most sand and gravel is free-use and is used in highway construction. There is a practically unlimited supply of average grade sand and gravel.
Cinders	None		Unknown		20,000 (est.)	100%	Sub-economic resources because of distance to markets.

1/ Summa Corp. has produced an unknown amount of gold which is being held in inventory.

2/ Includes project in Northumberland Canyon which is outside the Resource Area. The headquarters labor pool and general focus of this operation is considered within the R.A.

Table 3

EMPLOYMENT AND PROCEEDS OF MINES BY COMMODITY
TONOPAH RESOURCE AREA, 1975

COMMODITY	NUMBER OF EMPLOYEES EMPLOYMENT (8-75)	6 MONTHS - GROSS 1/ $	6 MONTHS - DEDUCTIONS 1/ $	6 MONTHS - NET 1/ $
Leaseable Oil	6	354,000	211,000	143,000
Geothermal Steam	0	0	0	0
Coal	0	0	0	0
Locatable Gold	62	0	169,000	(169,000)
Silver-Lead	6	0	51,000 2/	(51,000) 2/
Copper	4	0	189,000 2/	(189,000) 2/
Barite	16	1,647,000	1,393,000	254,000
Turquoise	2	26,000	23,000	3,000
Uranium	-	0	48,000	(48,000)
Saleable Sand and Gravel	-	-	-	-
Cinders	0	0	0	0
Other	8		3/	
TOTAL	104	2,027,000 4/	2,084,000 4/	57,000 4/

1/ Based on six-month period ending 12-74, unless otherwise noted.

2/ Based on six-month period ending 6-75.

3/ Not significant expenditures or returns.

4/ Six-months average from data from either last half of 1974 or first half of 1975.

Geothermal steam is not being produced at present within the resource area. The marketing for geothermal steam and for electrical power generated from it is near-area and regional, respectively. The geology and hydrology of known geothermal sources in the resource area do not indicate a potential for significant development. Only further exploration by interested parties will decide if development is feasible.

There is no production of copper at present within the resource area. Optimistic estimates of total recoverable reserves at Anaconda's Hall Project represent less than 1 percent of annual U.S. production. This operation, if it goes into production, would be only marginally significant on a regional basis.

Data on reserves of gold and silver are inadequate to evaluate possible significance. If estimates of reserves based on information supplied by interested parties are realized, gold and silver production would be regionally significant.

Barite is definitely a significant commodity produced within the resource area and could increase in importance. Barite is used largely as a component of drilling mud in the petroleum industry. Barite from the Northumberland area, which lies just outside the resource area but within the Battle Mountain District, is trucked 70 miles through Tonopah to the railhead at Mina, then freighted to Texas. Production is currently about 100,000 tons per year, which represents 20 percent of Nevada production, 10 percent of U.S. production, and 2 percent of the world production. Reserves in northern Nye County are estimated at 50 million tons* which represents, by itself, 10 years of current world production. Demand for barite is projected to increase at an annual rate of 4 percent** to a total of 180 percent by 1990. According to BLM's Social Economic Data System, national barite demand will increase 206 percent over 1970 levels by 1990. Certainly any such increase in demand will be easily met by barite reserves in Nye County.

C. Employment and Population Dependence on National Resource Lands

Employment: Employment in mining and related industries is significant in the planning area. Approximately 40 percent of 1974 employees in northern Nye County were working in mining or directly related transportation and construction activity.

Mining activities for locatable minerals take place on mining claims or patented (private) lands; therefore, an estimate of dependence on BLM lands has limited utility. Since a major proportion of lands in the planning area are National Forest or national resource lands, new prospects are heavily dependent upon public land. An off-setting factor is that much

* Nevada Bureau of Mining and Geology Bulletin 82, 1972.
** Engineering and Mining Journal, March 1975

of the new mining activity is to re-work old claims or tailings piles.

All the existing petroleum in the resource area is from BLM lands. Sand and gravel production is primarily from BLM lands.

Population Dependence: Allocating the 1974 population and employment estimates for Nye County to northern Nye County in the same proportion as existed in 1970, the total population was approximately 2,900 and the total employment was 1,080. The population/employment ratio was 2.7. Mining-based employment for 1974 in the resource area was 200; therefore, approximately 530 residents were dependent upon mining. With mining activity increasing to 180-206% of current levels, an expected 900 to 1100 residents would be dependent on mining by 1990.

In northern Nye County (including the Gabbs area) there were approximately 400 employees in 1970 in mine-related jobs. This represented approximately 40 percent of all employed persons. With the projected growth in mining, the resource area will be approximately 50 percent dependent upon mining employment. However, mining is an unstable industry due to the fluctuating nature of the international minerals market which can lead to an unstable economic base (as the past history of ghost towns in Nevada indicates).

D. Additional Analysis

Persons directly employed in mining, (and listed as employed by the mines) do not reflect employment in the mining industry because transportation and initial excavation down to ore-bearing rock are contracted out to transportation and construction firms; thus, the number engaged in mining is higher than employment figures would indicate.

Total direct and indirect figures for income and employment due to mining reflect estimated employment in transportation and construction due to mining.

Table 4

DIRECT AND INDIRECT EMPLOYMENT AND INCOME DUE TO MINING
TONOPAH RESOURCE AREA, 1974

	DIRECT		DIRECT AND INDIRECT	
	INCOME ($1000)	EMPLOYMENT	INCOME ($1000) 4/	EMPLOYMENT 5/
Oil	70 2/	6 2/	75	8
Barite	338 2/	29 1/	362	37
Gold	397 2/	34 1/		
Total Mining Sector 6/	Mine 1,075 Transport 835 Construction 464	Miners 104 1/ Transport 60 3/ Construction 36 3/		
Total	2,374	200	2,548	252

1/ Only those employees listed as working in the mines by the Nevada State Inspector of Mines Annual Report 1974, Carson City, Nevada.

2/ Based on an average wage for mine employees in Nye County, Nevada Employment Security Dept., 1974 Nevada Statewide Wage Survey, and Nevada Employment and Payrolls, 1975, Carson City, Nev.

3/ Includes an estimate (80%) of employees engaged in transportation and construction associated with the mining sector, (a) Fillo, J., Liaison Officer, U.S. Bureau of Mines, Reno, Nev., (b) U.S. Dept. of Commerce, "Input-Output Structure of a Mine Economy," Survey of Current Business, February 1974, Washington, D.C., (c) U.S. Bureau of the Census, Minor Civic Divisions Fifth Count Data 1970, Washington, D.C.

4/ Using a value added factor of 1.0734, Nevada State Engineers Office, Water for Nevada Special Report Input-Output Economic Models.

5/ Using a value added factor 1.2585; Ibid.

6/ Total includes exploration, development, and production which is held in inventory.

.23 Forest Products

A. Required Analysis

Production: No commercial saw timber is available for cut from any source within the area. BLM has had no commercial sales of any timber product within the resource area; all sales have been on a demand basis to local ranchers and residents to satisfy their immediate need.

The Forest Service is the only other manager to have and sell any forest products. Studies by the Forest Service, 1968-72, have indicated production of posts and Christmas trees in pinyon-juniper types could be increased significantly by initiating silvicultural practices; however, no detailed cost-benefit analysis was published. In addition, the unit in which this work was done appears to be a considerably better site than the average BLM pinyon-juniper area in the Tonopah Resource Area.

With the exception of fuel wood, the quantity and quality of forest products on BLM land in the resource area is poor. The opportunity to economically improve the situation appears limited unless new products, processes, and harvesting techniques are evolved.

B. Significance

Economic Demand: There has been no significant income and employment generated by commercial utilization of local forest production. There are no industries dependent on local forest production. Demand and use is by ranchers for posts and the local population for Christmas trees and pine nuts. There is some demand for pine nuts by Indians from outside the resource area.

Bench mark data published in the Social Economic Data System by the BLM Denver Service Center indicates an increase of approximately 500 per cent in board feet demand by 1980 and 1000 per cent by 1990. It is probable that this demand will be basically in fuel wood. This is dependent on several factors: population increase, energy needs, and costs and demand from the population centers of Las Vegas and western Nevada. Transportation costs to these centers will be a limiting factor in amount of fuel wood cut.

Fuel wood sales by both the BLM and Forest Service increased in 1975, about 150 per cent over the 5 year average of 1968-72. Recent increased demand for fuel wood in western Nevada tends to reinforce the local indication of this upward trend.

C. Socio-Cultural Values

The Resource Manager should be aware that a significant cultural value exists in pinyon-juniper tree and pinyon nuts in connection with Indian culture (See rating of socio-cultural values .31).

Table 5

PLANNING AREA ANALYSIS
FOREST PRODUCTS

PRODUCTION TABLES

1. Area

Type	Acres BLM	Acres Other	Acres Total	Percent BLM
Pinyon-Juniper	485,000	350,000	835,000	58

2. Product Sales - 5 year (August 1968 - 1972)

Type	Thousand Board Feet BLM	Thousand Board Feet Other	Thousand Board Feet Total	Percent BLM
Posts	1		1	
Fuel Wood	-0-	-	-0-	
TOTAL	1	33	34	3

3. Product Sales - 1975

Type	Thousand Board Feet BLM	Thousand Board Feet Other	Thousand Board Feet Total	Percent BLM
Posts	7	2	9	78
Fuel Wood	13	37	50	26
TOTAL	20	39	59	34

4. Vegetative Sales - 1975

Type	BLM	Other	Total	Percent BLM
Christmas Trees	100	285	385	26

.24 Range Management

A. Required Analysis

Outputs and Values from Forage Production on National Resource Lands other than Livestock Grazing: There are several program elements which benefit from or utilize forage and other herbage production other than livestock.

(1) All species of wildlife inhabiting an area utilize vegetation for one purpose or another. See the section on wildlife habitat in URA wildlife section for a detailed analysis and discussion.

(2) Watershed is another element intimately tied to range management. With some exceptions, the condition and value of the watershed (its ability to store and check overland flow of water) is closely related to the condition of the range. Watershed values and demands often are competitive with livestock for use of the range. There is no readily available data which quantifies this competition.

(3) In some areas of the resource area, wild horses benefit from range management and forage production. The URA range section contains detailed data on forage consumption and competition with livestock.

B. Significance

Program Significance and Expected Trend: Because range management is so closely tied with watershed wildlife habitat management, wild horses, and the local livestock industry, it is expected that the range management program within the resource area will remain a major component of the total natural resource management spectrum. See Table 6 for the importance of forage production on BLM lands to the local and regional livestock industry.

Regional and Local Significance of Livestock Grazing on National Resource Lands: Tables 6 and 7 depict the importance of forage production on BLM land to the livestock industry both for forage and for income. Table 8 shows the significance of range forage on national resource lands to local employment and income.

The national resource lands within the resource area supply approximately 49 per cent of all livestock feed in the resource area and approximately 4 per cent of all feed in the State. Within the resource area, each AUM of national resource land livestock forage generates approximately $1.26 of net personal income within the livestock industry. Livestock forage produced on BLM land in the planning area generates approximately 1 per cent of the net income within the State from the livestock industry.

Table 6

TONOPAH RESOURCE AREA, LOCAL AND REGIONAL SIGNIFICANCE OF LIVESTOCK FORAGE, ALL SOURCES AND NATIONAL RESOURCE LANDS

Class of Stock	Feed AUM's (PA)	Feed AUM's (State)	Percent of Planning Area to State
Cattle			
Total	254,000	6,637,000	4%
National Resource Lands	123,000	1,845,000	7%
NRL Percent of Total	48%	28%	
Sheep			
Total	13,000	425,000	3%
National Resource Lands	8,700	225,000	4%
NRL Percent of Total	67%	53%	
Cattle and Sheep			
Total	267,000	7,062,000	4%
National Resource Lands	132,000	2,070,000	6%
NRL Percent of Total	49%	29%	

Sources of Information:

Statistical Reporting Service, USDA
1974 Nevada BLM Statistics
Estimates by Michel-Holdren

Table 7

LOCAL AND REGIONAL INCOME EFFECT OF FORAGE PRODUCTION ON NATIONAL RESOURCE LANDS

	Income ($)		Planning Area as Percent of State
	Planning Area (1974)	State (1972)	
Total From Livestock Production	$214,000	$35,452,000	0.6%
National Resource Lands Generated From Livestock Grazing	$105,000	$10,281,000	1.0%
NRL Percent of Total	49%	29%	
Income Per National Resource Lands Licensed AUM	1.26	4.97	
Income Multiplier For Indirect Income	1.103	1.355	

Sources of Information:

SED System
District Socio-Economic Profile
1972 Personal Income, Survey of Current Business,
U.S. Department of Commerce
1972 Nevada BLM Statistics

Table 8

INCOME EFFECT

GABBS, ROUND MOUNTAIN, AND TONOPAH

MINOR CIVIL DIVISIONS

Information taken from Demographic Data from 1970 Census for Minor Civil Divisions and Table 2.

Total Employed	1,358
Employed in Agriculture	58
Percent of Employed Workers in Agriculture	4.3%
Percent of Agriculture Income Derived from Livestock Grazing on National Resource Lands	49%
Percent of Employed Workers Dependent on National Resource Lands	2.1%
Number of Employed Workers Dependent on Livestock Grazing on National Resource Lands	29

An Animal Unit Month (AUM) is a commonly accepted measure of the forage required to feed one animal unit (1 mature cow, or 5 sheep, etc.) for one month.

The comparison in Table 6 between forage on national resource lands to the total in the resource area and in the State as a whole is rather crucial. The total forage for the resource area was computed by adding the BLM produced forage to a calculation of Forest Service produced forage and estimating the AUM's from private land in the resource area. The State totals were computed from the numbers of animals produced in the State.

Income in Table 7 was calculated by using farm income for Nye County ranchers and employers from 1972 personal income figures* and allocating a part of that income to the resource area by using the numbers employed in northern Nye County. National resource lands generated income was arrived at by a comparison of BLM land area in the resource area. Income derived from national resource lands was derived by the amount of national resource land forage (AUMs) sold in the resource area to arrive at the income per national resource land licensed AUM.

The minor civil divisions data was taken from the Bureau of Census reports on the Minor Civil Divisions of Gabbs, Round Mountain, and Tonopah, an area that roughly coincides with the Tonopah Resource Area.

Within the Minor Civil Divisions of Gabbs, Round Mountain, and Tonopah, approximately 2 percent of all employed workers, or 29, are dependent upon livestock grazing on national resource lands, and 49 percent of personal income from livestock grazing in this area is from livestock grazing on national resource lands.

C. Additional Analysis

Economic Demand Projections:

Allocation of regional demand in 1990 derived from the BLM Socio-Economic Data system for cattle - bench mark projection factor through 1990 = 1.18.

123,000 AUMs x 1.18 = 146,000 AUMs regional demand in 1990 for cattle in the Planning Area.

For sheep - bench mark projection factor through 1990 = 1.22.
8,714 AUMs x 1.22 = 10,600 AUMs regional demand in 1990 for sheep in the Planning Area.

Local demand estimate for 1990 from Water for Nevada, 1969 Agriculture Forecast for Future Water Resources, Volume 8, Nye County, Nevada - trend factor for cattle through 1990 = 1.066.

* Survey of Current Business, U.S. Department of Commerce

123,000 AUMs x 1.066 = 131,000 cattle AUMs demand from national resource lands in 1990.

Nevada trend factor for sheep through 1990 = 1.000. No increased demand.

Demand projection limits through 1990 for the Planning Area:

Cattle	-	131,000 AUMs Minimum	-	146,000 AUMs national resource lands Maximum
Sheep	-	8,700 AUMs Minimum	-	10,600 AUMs national resource lands Maximum

There are no known conditions or major changes in non-BLM sources of supply which will alter the above projections.

.26 Wildlife

A. Required Analysis

Fishing: Fishing in the resource area is limited, and is predominately on U.S. Forest Service lands. The streams are generally in a deteriorated condition on BLM land and have been stocked with rainbow trout. They offer the potential for greater fishing opportunities with good habitat management practices as outlined in the URA Step 4, wildlife section.

Hunting: Hunting in the resource area is primarily for mule deer, chukar partridge, sage grouse and rabbits. Approximately 60 percent of deer hunters hunt more than one species at the same time; therefore, the total hunter days used in the calculation include approximately 30 percent overlap or duplication. The majority of hunters in the resource area are residents of the state, with approximately 90 percent originating from the following counties: Nye, Churchill, Clark, Mineral, and Washoe.

The available hunting resource is not being utilized at present. More animals (deer, chukar, sage grouse, and rabbits) could be harvested from the existing populations. In addition, the populations could be expanded through good habitat management practices which are outlined in the URA wildlife section.

B. Significance

Hunting is significant to the local and regional population. This is reflected in the following table:

Table 9

Population to Hunter Ratio

	Population	Hunters		#Residents/Hunters
Nye	5,190	974		5.33
Churchill	10,300	2,417		4.26
Clark	291,141	17,370		16.76
Mineral	8,800	1,266		6.95
Washoe	131,000	15,476		8.46
	446,431	37,503	Average	11.9
Statewide	517,553	53,966		9.6

Table 10

HUNTING

Species	Hunter Days	Hunter Days	Unit Species	Hunter Days	Unit (acres) Habitat	Percent Habitat on National Resource Lands in Resource Area	Remarks
Mule Deer (1)	5,600	5,600	4,500*	5,600	1,500,000	35	Balance on U.S. Forest Service for units 16, 17 and 200 for 22. *Based on 1975 Nevada Department of Fish and Game Report.
Antelope (1)	35	35	150	35	1,000,000	100	Remnant populations at low levels.
Mountain Lion (1)	140	140	100	140	1,500,000	35	Balance on U.S. Forest Service.
Bighorn Sheep (2)	-	300	300	-	200,000	25	Primarily on U.S. Forest Service. Remnant herds.
Sage Grouse (1)	500	500	36,000	500	200,000	40	Balance on U.S. Forest Service and some private.
Chukar (1)	900	900	24,000	900	300,000	70	Balance on U.S. Forest Service.
Rabbits (2)	1,300	1,300	30,000	1,300	4,500,000	75	Hunting incidental to bird hunting.
Quail (3)	2,000	-	112,000	-	-	5	Some introduced in Resource Area but most of harvest is of Gambels Quail in southern Nye County.

Table 10
(cont.)

HUNTING

Species	Hunter Days	Hunter Days	Unit Species	Hunter Days	Unit (acres) Habitat	Percent Habitat on National Resource Lands in Resource Area	Remarks
Dove (3)	Est. (100) 3,000	100	100,000	100	1,500,000	75	Migrate through Resource Area in large numbers, most of harvest in southern Nye County.
Waterfowl (3)	Est. (100) 1,800	100	16,000	100	25,000	85	Most of use and harvest at Kirch Wildlife Management Area in eastern Nye County.
TOTAL	15,275						

(1). Data are for Nye County; however nearly all use and/or habitat is in Resource Area.

(2). Data refers to Resource Area only and has been estimated from county-wide data.

(3). No reliable data to indicate hunter use within Resource Area.

FISHING

Species	Angler Days	Angler Days	Unit Habitat	Percent Habitat on National Resource Lands in Resource Area	Remarks
Cold and Warm Water	17,046 (Nye Co.)	7,021	82 miles	18	Streams are deteriorated and fish are stocked.
	7,021	439	216 acres	97 private	
	1,264 NRL	(374	(2 acres at Rye Patch Reservoir)		

C. Additional Analysis

Income - Employment Measures

(1) Local

8,500 hunter days total.

$4.00 per day local expenditure (a).

$34,000 local expenditure.

÷ 1.5 = $22,667 direct income (b).

x 1.08 = $24,480 total income (c).

$22,667 ÷ $8,230 average income = 2.75 employees.

(2) Statewide

$100 per trip total local hunting-related expenditure (d).

2-1/2 day average trip; therefore, $40 per day total expenditure.

$40 x 8,500 hunter days = $340,000 total expenditure.

÷ 1.5 = $226,667 direct income (e).

x 1.08 = $244,800 total income (f).

$226,667 ÷ $8,230 average income = 27.5 employees.

7,021 angler days.

$4/day x 7,021 = $28,084.

÷ 1.5 = $18,722.

÷$8,230 average income = 2.28 employees.

Data Source:
(a) Battle Mountain District Socio-Economic Profile
(b) BLM Manual 1607 (PAA) Procedures
(c) Battle Mountain SEP
(d) Agricultural Experiment Station, Economics of Big Game Resources in Nevada, University of Nevada, Reno.
(e) BLM Manual 1607.
(f) Battle Mountain SEP

The above calculations were made on a local and statewide basis to reflect expenditures made locally as well as those made in other areas (excluding expenditures for equipment, such as vehicles, guns, clothing, etc.). The equipment expenditures may be significant but no data is available to reflect the dependency of those expenditures on the resource area or national resource lands. The included expenditures include licenses, tags, repairs, gas and oil, meals, food, beverages, lodging, entertainment, ammunition, rentals, processing, and other miscellaneous expenditures.

Furbearer data in the following table was taken from Furbearer Investigations, (Ashman and Jefferes, 1975). This activity may result in more income than is indicated because no license is required to take coyote and bobcat and many are taken as predators, thus not hunted for sport.

Calculations for fishing are based on a $4 per day general recreation expenditure and again, does not include the cost of equipment. Similar to hunters, the fishermen are primarily residents, and although the income and expenditures for fishing are low, the importance of this activity is very high in terms of social and personal values.

Furbearer harvest value:

$8,842 ÷ $8,230/average income = 1.07 employees.

TABLE 10a

Furbearer Harvest

Nye County	#	Average Price (Pelt)	Value
Gray Fox	14	$ 10.91	$152.74
Bobcat	106	$ 58.44	$ 6,194.64
Coyote	158	$ 14.62	$ 2,309.96
Badger	10	$ 6.73	$ 67.30
Striped Skunk	55	$ 2.14	$ 117.70
		Total	$ 8,842.23
		Statewide Total	173,041.23

Statewide Total for Fur Pelt Harvest by Licensed Trappers.

1970	$81,299.00
1971	$46,623.00
1972	$79,190.00
1973	$142,705.00
1974	$292,261.00
1975	$173,041.00

Note: 6,700 coyotes taken by U.S. Fish & Wildlife Service during 1974-75 season statewide; total value $497,954.00.

Demand Projection

Assume 66 percent rate of increase for 1990 based on population increases in Nye, Lincoln, and Clark Counties. (Recreation for Nevada, 1971, projects a 4-fold increase by 1990 for Nye County.)

The demand projections in the following table do not adequately reflect the hunting resource situation for the resource area. As mentioned above, the resource is not being fully utilized at present and can be increased by improving habitat conditions on existing habitat. (See wildlife URA Steps 3 and 4.) The situation at present provides a high quality hunting experience due to low hunter density. The quality of experience can be improved through better habitat management and would not be degraded by a moderate increase in hunter density. Increases can also be achieved by introductions and re-introductions of species such as elk, bighorn sheep, and quail.

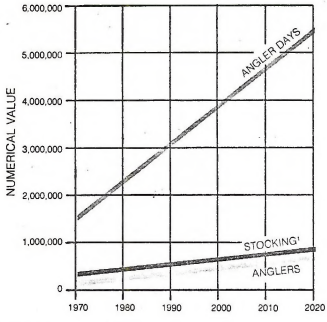
Statewide trends are reflected in the following graphs taken from Water for Nevada, Volume 6, published by the State Engineer's Office.

In general, the hunter-fisherman use continues to increase while the fish populations tend to decline. This latter trend must be corrected through habitat and species management.

GRAPH 1:

ALL FISH DATA PROJECTIONS

RESIDENT AND NONRESIDENT ANGLERS, ANGLER DAYS AND STOCKING, STATEWIDE, 1970-2020

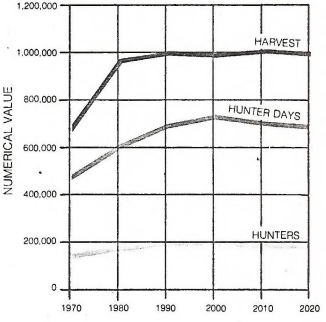


¹POUNDS

GRAPH 2:

ALL GAME DATA PROJECTIONS

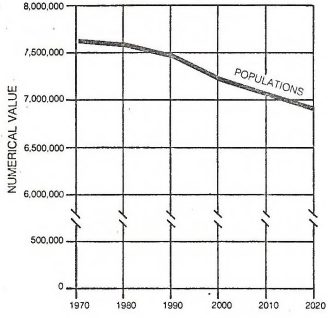
RESIDENT AND NONRESIDENT HUNTERS, HUNTER DAYS AND HARVEST, STATEWIDE, 1970-2020



GRAPH 3:

ALL GAME DATA PROJECTIONS

POPULATIONS, STATEWIDE, 1970-2020



GRAPH 4:

ALL FISH AND GAME DATA PROJECTIONS

RESIDENT AND NONRESIDENT ANGLERS AND HUNTERS, ANGLER AND HUNTER DAYS, STATEWIDE, 1970-2020

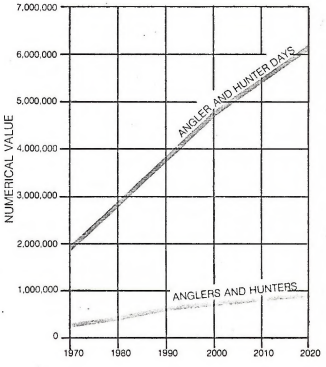


Table 11

Hunter Day Demand 1990		Coefficient Hunter/Unit of Days/Habitat	Hunter Demand
Deer	9,296 7,050*	.0037	2,500,000 acres
Antelope	58	.000035	1,660,000 acres
Mountain Lion	232	.000093	2,500,000 acres
Bighorn Sheep	-	-	-
Sage Grouse	830 970*	.0025	332,000 acres
Chukar	1,494 1,450*	.003	500,000 acres
Rabbits	2,158	.0003	7,190,000 acres
Quail	-	-	-
Dove	166	.00007	2,370,000 acres
Waterfowl	166	.004	41,500 acres
Fishing	654	85.6	136 miles
	729	2.24	325 acres
	620 (Rye Patch)	18.7	3.3 acres

* Water for Nevada, 1973.

.27 Recreation

A. Required Analysis

Hunting: Three species of big game, two species of upland game, three species of rabbits, and numerous species of migratory birds account for the 15,635 hunter days expended in Nye County. The following analysis represents that portion or segment which is attributable to Bureau administered lands within the Tonopah Resource Area. (See Table 12.)

Several factors shed additional light on to the total number of hunter days. First, there was considerable overlap on several species of upland game. For example, a hunter could spend one day hunting chukars, but would also shoot a rabbit if the opportunity existed. Therefore, the information which he provided through the questionnaire, (the basis of the report that was used as a reference source), would indicate one day was spent hunting chukars and one day was spent hunting rabbits. This doubling effect undoubtedly increases the overall hunting days and represents an overestimate.

Other factors also influence the total hunter days. Quail and blue grouse populations, for example, are either totally out of the resource area, such as quail found in Pahrump Valley, or blue grouse well within Forest Service boundaries (Toiyabe, Toquima, and Quinn Ranges). Big game (mule deer) hunting and hunter days are also ambiguous. Total number of hunter days do not necessarily directly correspond to the percent of habitat. Seasonal weather variations and yearly seasonal recommendations play more of a role in determining whether or not the majority of the deer herd is on BLM land or still on Forest Service land.

Overall characteristics of the hunters in Nye County are: residents, 30 percent (this includes all counties within the State); 35 years of age; 89 percent male; 73 percent married; and an average annual income of $9,700.

For a further analysis of hunting, see the Wildlife Section (.26).

Fishing: Within Nye County, 56 streams with a total length of 471 miles have been identified. Through detailed map analysis it was determined that 82 miles of the 471 miles of stream lie within the planning area, with 65 miles on Forest Service land, 14 miles on national resource land, and 3 miles on private land. These figures indicate that only 15 percent of the total miles of fishable streams within the planning unit can be attributed to national resource lands.

Total visitation, or angler days, has been computed for the county and resource area. The primary source of data was a six-year study (1968-1973) developed by the Nevada Department of Fish and Game from a statewide angler questionnaire. Angler days for Nye County averaged 17,046; however, only 7,021 days could be attributed to the resource area, and only 1,264 days of that to national resource lands.

Table 12

Hunting and Fishing

Species	Percent Habitat within Tonopah Resource Area on National Resource Lands	Nye County Hunter Days	Tonopah Resource Area Hunter Days
Mule Deer	35	5,600	2,800
Antelope	100	35	35
Mountain Lion	35	140	49
Sage Grouse	40	500	200
Chukar Partridge	70	900	630
Quail	0	2,000	
Blue Grouse	0	150	
Rabbits	50	1,500	750
Doves	25	3,000	750
Waterfowl	5	1,800	90
Hunting Totals		15,625	5,304
Fish	17	17,046	1,264

General Visitor Use:

(1) Winter Sports: As covered in Steps 3 and 4 of the URA, there are no winter sports areas within the resource area which receive recreational use. Snowfall is not sufficient for skiing or sledding, nor is there enough water for ice sports.

(2) Water Sports: As covered in Steps 3 and 4 of the URA, there are no water sport areas within the resource area which receive recreational use. Water is scarce in the area.

(3) Collecting: In reviewing available data, no statistically reliable information could be found. The following information is based on estimates by BLM resource area personnel:

(a) Tonopah Gem Field: This area (QCrm-004 Overlay Reference Code) in URA Step 3, located near the junction of Highway 8A and U.S. 6, has an estimated visitor use of 365 visitor days.

(b) Pine Nut Collecting: These areas, (QCvg 002-005 Overlay Reference Code) in URA Step 3, are basically the higher elevation mountain ranges within the resource area. Estimated visitor use, with consideration for this activity's annual differences, is thought to be close to 200 visitor days per year. For further analysis see the socio-cultural values analysis (.31).

(c) Historical and Primitive Artifact Collecting:

According to many residents of the area (established in the Socio-Cultural Values section), this is a common activity by both residents and non-residents. However, this conflicts with scientific and historical goals. In addition, antiquities collecting is illegal, according to State and Federal laws. (See social values analysis and problems and issues summary at the end of this document).

(4) Specific Sightseeing: In reviewing available data, only the Nevada Department of Comprehensive and Natural Resources Statewide Comprehensive Outdoor Recreation Plan (SCORP) had any use data estimates. The SCORP states the most popular outdoor recreation activity for families in total user days in Nevada is sightseeing. The resident demand was 1.7 million user days in 1970, and was estimated to increase statewide by 36 percent by 1980, and to 54 percent by 1985.

(5) Specialized Activities: The only specialized activity which has significant impact within the resource area could be the off-road vehicle use of Crescent Sand Dunes. In the past, this area received some organized use (Special Land Use Permits) in the form of specialized events. Two events were held in 1971 and 1972, and only one event in 1973. However, since that time interest has declined and only occasional weekend use has been observed.

The SCORP has estimated off-road vehicle resident demand at 242,000 user days in 1970, with a statewide increase of 450 percent by 1985.

(6) General Pleasure:

(a) Camping - Developed Sites - An indicator of future potential is the use of existing facilities at three Forest Service campgrounds: Pine Creek, Peavine Creek, and Cherry Creek which received approximately 4,000, 4,000, and 400 visitor use days respectively in 1974; the Nevada State Park, Berlin - Ichthyosaur Park had 9,000 visitor days in 1974. Overall organized developed sites on national resource lands for this activity do not exist.

(b) Picnicking: No numerical information is available. However, during the interviews for the socio-cultural values section (.3), Crescent Sand Dunes and several ghost towns were identified as occasional picnic sites.

B. Significance

From the review of available data regarding recreation use in the resource area, the following analysis is offered:

1. The majority of recreation use in the area is by local residents primarily for hunting and fishing. See the socio-cultural values section for consideration of social and esthetic considerations.

2. In general, outdoor recreation is a minor contributor to the area's economy. See the economic analysis portion of the wildlife section (.26) for contribution to the local economy from hunting and fishing.

3. A major amount of the recreation opportunities are also provided by the Forest Service within the local area.

Currently, recreation in this area has small attraction for the non-resident recreationist, although no reliable information regarding use is available. With the exception of sage grouse, chukar, and deer, and area's recreation opportunities are not significantly high enough in quality or quantity to attract non-local users from other areas of the State or out of State who have easier access to similar areas or facilities. In addition, high quality areas that do exist are generally unknown to the non-resident due to the remoteness of the resource unit.

Looking to the future, it is anticipated that the opportunities in the resource area will take on much higher significance from both a regional and statewide viewpoint.

According to Water for Nevada* Volume 7, Water Related Recreation in Nevada, an increase of 86 percent is projected from 1970 to 1980. Nye County visitor days are projected to increase by 342 percent. The central hydrographic region, which includes the Tonopah Resource Area, is expected to increase visitor use by 140 percent over 1970. The Tonopah Resource Area is considered typical of the central hydrographic region.

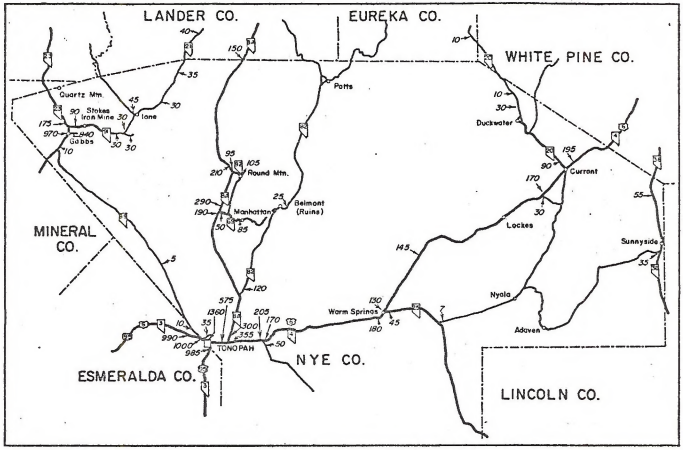
*Nevada State Engineer's Office

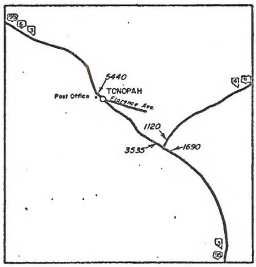
As those areas which are now being utilized become increasingly popular and receive more user pressure, the Tonopah Resource Area may well take on a "last frontier" role to those seeking solitude or open space and a high quality recreational experience.

C. Additional Analysis

The map and table on the following page from the Nevada Department of Highways' 1974 Annual Traffic Report displays the 1974 use of highways in the resource area. It is estimated (by Tonopah residents in interviews) that a high percentage of those people using the roads are recreationists or are traveling for recreational purposes.

There is no accurate data for general recreational use on national resource lands in the Tonopah area. However, the State Engineer's Office calculates that $292,681 was spent on recreation in all of Nye County in 1970. That, divided by a factor of 1.5, yields a direct income of $195,120. This is multiplied by a factor of 1.08 (Trade Sector Multiplier from the BLM socio-economic data system) to yield $210,730 in total income. This is divided by an average income in the trade sector (from the socio-economic profile 1607) of $8,230 to estimate a figure of 25.6 jobs dependent on recreation in Nye County. Most of this use is estimated to be hunting and fishing which is further analyzed in the Wildlife Section (.26).





TONOPAH AREA

LOCATION - SR 8a (FAS 624), 0.5 mile north of U.S. 6, east of Tonopah

1974 ANNUAL AVERAGE DAILY TRAFFIC 300

PERCENT CHANGE FROM 1973 130.4

PERCENT 30TH HIGH HOUR IS OF ANNUAL A.D.T. 14.9

MONTHLY DATA

MONTH	ADT	PERCENT OF ANNUAL ADT
January	247	81.8
February	363	119.1
March	356	114.3
April	269	88.6
May	261	85.9
June	302	99.7
July	287	94.3
August	270	88.9
September	292	95.9
October	418	138.1
November	314	103.2
December	275	89.4

HIGHLINE SEASONAL

Source of Material. From Annual Traffic Report, Nevada Highways 1974.

Map 7

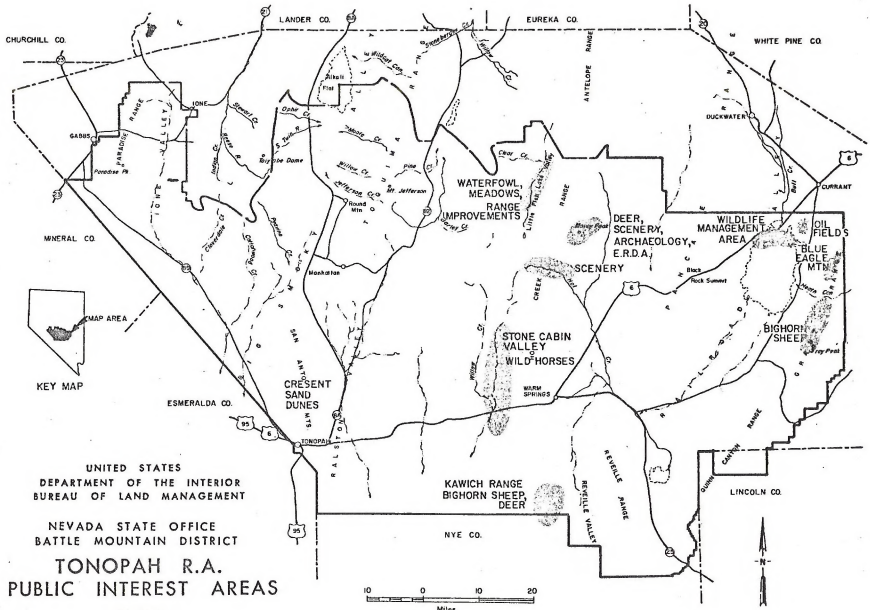
.3 Social Values Analysis

This section is divided into 3 sub-sections:

.31 Socio-cultural Values

.32 Social Well-being

.33 Public Positions and Expenditure Analysis


CHURCHILL CO.
LANDER CO.
EUREKA CO.
WHITE PINE CO.
MINERAL CO.
ESMERALDA CO.
NYE CO.
LINCOLN CO.
CURRANT
DUCKWATER
GABBS
Paradise Pk
Bayshe Dome
Round Mtn
Manhattan
Austin
Pilot
Cedar Cr.
Willow Cr.
Jefferson
Pine
Mosquito Cr.
Stevens Cr.
Spencer Cr.
Hickison Cr.
Cherry Creek
Reese R.
Big Creek
Antelope Range
Toiyabe Range
Quinn Canyon Range
Reveille Range
Reveille Valley
Big Smoky Valley
Tonopah
Ralston
WATERFOWL, MEADOWS, RANGE IMPROVEMENTS
DEER, SCENERY, ARCHAEOLOGY, E.R.D.A.
WILDLIFE MANAGEMENT AREA
OIL FIELDS
BLUE EAGLE MTN.
SCENERY
Black Rock Summit
Stony Pass
BIGHORN SHEEP
STONE CABIN VALLEY WILD HORSES
Warm Springs
CRESENT SAND DUNES
KAWICH RANGE BIGHORN SHEEP, DEER
MAP AREA
KEY MAP
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NEVADA STATE OFFICE
BATTLE MOUNTAIN DISTRICT
TONOPAH R.A.
PUBLIC INTEREST AREAS
NOV. 1975
10 0 10 20
Miles
N

Map 8

.31 Socio-Cultural Values

The socio-cultural values section was prepared by reviewing Bureau files and the public participation record from the last Tonopah Management Framework Plan (1972). The Battle Mountain District Resource Specialists and the Area Manager were asked to formulate questions to be used in an interview, and local group leaders to be interviewed. An interview was then made with several individuals whom it had been determined would be able to articulate their individual group positions. The same questions were asked of each individual and the results are displayed on Table 13 (Extent and Nature of Socio-Cultural Values) and the Rating of Socio-Cultural Values section at the end of the rating section. The important values are evaluated for significance under the criteria of the section.

Table 13

EXTENT AND NATURE OF SOCIO-CULTURAL VALUES

Item of Socio-Cultural Values	NAME OF GROUP								
	Nevada Cattlemens Association	Nye County Commissioners	Nevada Miners and Prospectors Assn.	Tonopah Lions Club	Nye County Sportsmens Association	National Wildlife Federation	Sierra Club	Nevada Historical Society	Nevada Outdoor Recreation Association
Beliefs									
Freedom			Preservation		Preservation				Preservation
Solitude	Preservation		Preservation						
Private Enterprise	Subsistence	Preservation	Preservation	Preservation					
Law and Order		Preservation							
Life Style									
Ranching	Subsistence								
Mining			Subsistence						
Small Town		Preservation		Preservation	Preservation				
Structure and Antiquities									
Mining Ghost Towns		Recreation	Recreation	Preservation			Recreation	Scientific & Historical	Recreation
Indian Artifacts				Preservation			Preservation	Historical & Scientific	Preservation
Objects									
Wild Horses							Preservation	Preservation	Preservation
Hawks and Eagles							Preservation	Preservation	Preservation
Game		Recreation		Recreation	Recreation	Management	Management		Preservation
Fish		Recreation		Recreation	Recreation	Management & Preservation	Management & Preservation		Management
Off-Road Vehicles		Recreation		Recreation	Management	Control	Control	Control	Control

Table 13 (cont.)

EXTENT AND NATURE OF SOCIO-CULTURAL VALUES

Item of Socio-Cultural Values	NAME OF GROUP								
	Nevada Cattlemens Association	Nye County Commissioners	Nevada Miners and Prospectors Assn.	Tonopah Lions Club	Nye County Sportsmens Association	National Wildlife Federation	Sierra Club	Nevada Historical Society	Nevada Outdoor Recreation Association
Places									
Grant Range	Grazing		Mining		Hunting	Primitive Area	Primitive Area		Primitive Area
Morey Peak	Grazing		Mining		Hunting	Primitive Area	Primitive Area		Primitive Area
Cresent Sand Dunes				Recreation		Preservation	Preservation		Preservation
Railroad Valley Wildlife Area					Hunting	Preservation	Preservation		Preservation
Oil Fields			Mining			Control	Control		
ERDA Blast Areas			Mining						
Morey Bench Deer Winter Range	Grazing					Preservation	Preservation		Preservation
Bombing Range			Mining			Preservation	Preservation		Preservation
Stone Cabin Valley Rangeland Reference Areas	Scientific					Preservation	Preservation		Preservation

Table 13 (cont.)

EXTENT AND NATURE OF SOCIO-CULTURAL VALUES

Item of Socio-Cultural Values	NAME OF GROUP					
	Wild Horse Organized Assistance	Nevada Archeological Society	Audubon Society	The Wildlife Society	Society for Range Management	Wildlife Management Institute
Structures and Antiquities						
Mining Ghost Towns		Scientific				
Indian Antiquities		Scientific				
Objects						
Wild Horses	Preservation			Preservation		Preservation
Hawks and Eagles			Preservation	Preservation		Preservation
Game			Management	Management		Management
Fish			Management	Management		Management
Off-Road Vehicles		Control		Control	Control	Control
Places						
Grant Range						
Morey Peak						
Railroad Valley Wildlife Areas						
Stone Cabin Valley Rangeland Reference Area	Wild Horses				Preservation Scientific	

A. Identification and Nature Table

The groups in the extent and nature of the preceding Socio-Cultural Value Table are not necessarily socio-cultural groups, but are instead mostly special interest groups who are concerned about the Tonopah Resource Area or some object of value contained in the area. The preceding was used because of the difficulty in identifying and isolating specific socio-cultural groups in the area. In addition, the special interest groups will be those groups that will be most active in stating positions on BLM proposals and actions. Accordingly, the feelings and beliefs of these groups of people were analyzed in relation to specific values and objects.

B. Determining Significance

The groups holding the values rated in the following table again are not all socio-cultural groups, but also include special interest groups; therefore, the survival of the group was considered, rather than the survival of the culture or physical survival of the group.

TABLE 14

RATING OF SOCIO-CULTURAL VALUES

Nye County Residents

Belief - Personal Freedom

Criteria	High	Medium	Low
Percent of Group holding Value	High		
Time Group has held value	+ 4 generations		
Uniqueness of Object to Value	Existence of Freedom is subject to individual perception		
Relationship to Survival of the Group			Limited Dependence
Intensity of Relationship	Highly emotional to perceived threat		

Belief in Private Enterprise

Criteria	High	Medium	Low
Percent of Group holding Value	High		
Time Group has held value	+ 4 generations		
Uniqueness of object to Value			Highly Transferable
Relationship to Survival of Group		Medium - the local economy is built on a mixed government private economy	
Intensity of Relationship		Relationship is emotional	

Ranchers - Ranching Life Style

Criteria	High	Medium	Low
Percent holding value	High		
Time Group has held value	+ 4 generations		
Relationship to survival of the group	Complete Dependence		
Intensity of Relationship	Highly emotional		

Miners and Prospectors - Mining Life Style

Criteria	High	Medium	Low
Percent holding value	High		
Time Group has held value	+ 4 generations		
Uniqueness of object to value	Non-transference		
Relationship to survival of the group	High Dependence		
Intensity of relationship		Emotional	

TABLE 14

RATING OF SOCIO-CULTURAL VALUES (Cont'd)

Tonopah Residents

Small Town Atmosphere

Criteria	High	Medium	Low
Percent of Group holding value	High		
Time Group has held value		2 to 4 generations	
Uniqueness of object to value		Limited transfer to other aspects	
Relationship to survival			No dependence
Intensity of relationship			Non-emotional

Nevada Residents and Historical Groups

Preservation of Historical Ghost Towns

Criteria	High	Medium	Low
Percent of Group holding value	High		
Time Group has held value			2 generations
Uniqueness of object to value		Limited transfer	
Relationship to survival			No dependence
Intensity of relationship		Medium	

Archaeological Groups

Indian Artifacts

Criteria	High	Medium	Low
Percent of Group holding value	High		
Time Group has held value			1-2 generations
Uniqueness of object to value	Unique		
Relationship to survival		Important to Group Existence	
Intensity of Relationship		Some emotion	

Wild Horse Groups and Supporters

Wild Horses

Criteria	High	Medium	Low
Percent of Group holding value	High		
Time Group has held value			1 generation
Uniqueness of object to value		Limited transfer	
Relationship to survival		Important to Group Existence	
Intensity of Relationship	Highly emotional		

TABLE 14

RATING OF SOCIO-CULTURAL VALUES (Cont'd)

Wildlife Groups

Hawks and Eagles

Criteria	High	Medium	Low
Percent of Group Holding Value	High		
Time Group has held value			1 generation
Uniqueness of object to value	Unique	-	
Relationship to survival			Little Dependence
Intensity of Relationship		Emotional	

Railroad Valley Wildlife Area

Criteria	High	Medium	Low
Percent of Group holding value	High		
Time Group has held value			2 generations
Uniqueness of object to value		Limited transfer	
Relationship to survival			Little Dependence
Intensity of Relationship			No emotion

Wildlife and Recreation Groups

Morey Peak and Blue Eagle Mountain Area

Criteria	High	Medium	Low
Percent of Group holding value	High - due to number of different groups to which this area is important		
Time Group has held value			1 generation
Uniqueness of object to value		Limited transfer	
Relationship to survival of group			Little Dependence
Intensity of Relationship		Medium	

American Indian

Pinyon Pine Trees and Pine Nuts - Nature of Value: Religious, Cultural, Food

Criteria	Degree of Significance High	Medium	Low
Percent holding value	High		
Time Group has held value	High		
Uniqueness	Unique to these objects, but not limited to this area		
Relationship to survival			Low
Intensity of Relationship	High		

TABLE 14

RATING OF SOCIO-CULTURAL VALUES

Values	Rationale
High Significance	
a. Ranching Life Style	Complete dependency of group
b. Mining Life Style	Dependence of group
c. Indian Artifacts	Uniqueness of value
d. Wild Horses	Emotional identification
Moderate Significance	
a. Personal Freedom	Existence is subject to preception
b. Private Enterprise	Mixed nature of local economy
c. Small Town Atmosphere	Limited dependence of group
d. Mining Ghost Towns	Limited transfer of value
e. Hawks and eagles	Endangered nature of species
f. Morey Peak Area	Importance of area to many groups
g. Pinyon Pine Trees & Nuts	Object not unique to area.
Low Significance	
a. Fish and Game	Low intensity, easy transfer
b. Off-Road Vehicles	Low intensity, easy transfer
c. Oil Fields	Low intensity, easy transfer
d. Bombing Range	Low intensity, easy transfer
e. ERDA Blast Areas	Low intensity, easy transfer

.32 Social Well-being

This section is intended to examine the community of Tonopah with respect to the State of Nevada by examining common quantifiable indicators. These indicators are population change, per capita income, migration pattern into or out of the area, the unemployment rate, and the per capita tax collection for schools, counties, cities, and towns.

The data was taken from the Battle Mountain 1975 Socio-Economic Profile (SEP), and is displayed in Tables 15, 16, 17, and 18.

Table 19 compares the State with Nye County and the Tonopah Resource Area in order to identify indicators which are significantly different between the State of Nevada, Nye County, and the Tonopah Resource Area. Depending on community values, these indicators may be considered bad or good. For instance, a negative difference in per capita income (County is less than State) may be seen as bad, whereas a negative unemployment rate (County is less than State) may be seen as good.

The social well-being thrust analysis at the end of this section is intended to analyze each BLM activity as it impacts social well-being.

A. Identification and Nature

Population Change: The geographic area of northern Nye County is approximately the same as for the Tonopah Resource Area. Northern Nye County had 3,221 residents during the 1960 census, and 3,327 residents during the 1970 census, for an average growth of .3 percent per year. For comparison purposes, Nye County population increased at the rate of 2.5 percent per year. This is primarily attributable to the activities at the ERDA Nevada Test Site, and land promotions in the Pahrump area which may be classed as a distant suburb of Las Vegas. From 1970 to 1974 the population of Nye County has diminished by approximately 10 percent.

The Battle Mountain District Statistical Region increased in population at a rate of 3.2 percent during the decennial period while the Nevada average was 5.5 percent per year.

The resource area is linked to other communities by the resource base (mining and agriculture) for which activity stimuli are primarily national or international events. Examples are: price of gold, price of feeder cattle, demand for barite as a petroleum well-drilling input, and activities related to national defense systems development and nuclear systems testing.

Real Personal Income: Nye County per capita income was 80 percent of the U.S. average in 1950, and 71 percent of the U.S. average in 1972. Effective buying income (median) was estimated by Sales Management Magazine to be 82 percent of the Nevada median.

Migration Patterns as an Indicator of Employment Opportunities: Nye County had a net migration of -10.9 percent between 1970 and 1973, compared to a +8.6 percent for the State. The services sector for Nye County includes employees of business service contractors serving activities on the Bombing Range (defense ordinance development and testing and nuclear systems testing). Employment in such activities has diminished significantly

(from 5,090 in 1970 to 3,510 in 1974) in recent years.

This reduction in employment has directly affected non-residents of Nye County; however, some secondary employment opportunities within the Tonopah Resource Area (specifically in the town of Tonopah) may have been influenced by the national defense-related activities reduction outside the Resource Area.

Nye County has shown overall declines in labor force and employment. Total employment has dropped from 2,190 in 1970 to 1,820 in 1974. Most of this decline has taken place in the non-agricultural sector; 2,010 in 1970 to 1,650 in 1974. Unemployment went from 1.7 percent in 1970 to 5.7 percent in 1974. This data is for residents only. Among non-residents, the service industry has made a much more dramatic decline from 5,090 to 3,510.

Unemployment Rate: During 1974, unemployment among Nye County residents was not as high as for the rest of the State.

Per Capita Taxation by Political Subdivision: Per capita taxation during fiscal year 1975 was significantly higher for schools and county functions in Nye County; however, per capita taxation for municipal functions was near the State average.

The relatively high per capita taxation rates may reflect diseconomies of public service delivery due to the small size of the local government. Whether this significant difference enhances or reduces well-being is difficult to determine without further investigation.

Table 15

COMPARISON OF 1970 TO 1974 EMPLOYMENT
EMPLOYMENT BY SECTOR IN NYE COUNTY AND BATTLE MOUNTAIN D.S.R.

	NYE		BATTLE MOUNTAIN D.S.R.	
	1970	1974	1970	1974
Agriculture	180	170	540	510
Mining	350	440	1,010	1,270
Construction	100	110	100	150
Manufacturing	10	20	10	20
Transportation	70	110	140	170
Trade	270	270	460	500
Finance	20	50	40	60
Services	5,090*	3,510*	5,150*	3,570*
Government	480	460	750	770

* Primarily non-residents working in southern Nye County.

Data Source Population 1, 2 and 3 Social Economic Profile

1. Nevada State Employment Security Department, County Labor Force Summary, 1974, Manpower Information and Research Section, Carson City, Nevada, July 1975.

2. U.S. Department of Commerce "Local Area Personal Income" Table 2, Survey of Current Business, Part 2, 1974.

3. U.S. Bureau of Census, Fifth Count Microfilm Data: Population and Housing Census, Nevada 1970, Census Uses Service, Washington, D.C., 1975.

Table 16

INCOME BY ECONOMIC SECTOR

	Northern Nye County			District Statistical Region Total	
	Employment	Percent of Total	Income Thousand Dollars	Employment	Income Thousand Dollars
Agriculture					
Farm and Ranch	58	49 (d)	196	398	4,696
Government Labor Earnings					
Federal Civilian			1,064		1,964
Military	170	56	672	480	872
State and Local			1,680		3,680
Manufacturing	19	31	31	19	31
Mining	272	66	2,442	1,122	(10,073) (c)
Construction	121	30	540	161	(719) (c)
Transportation and Communication	77	48	624	137	(1,110) (c)
Wholesale and Retail Trade	273	67	1,340	503	2,740
Finance, Insurance and Real Estate	118	32	W	138	(2,170) (c)
Services	70	83	(1,749) (b)	130	2,449
Other	218	98	W	218	2,180
TOTAL	1,493	77	12,582	3,463	29,682

Footnotes: ( ) = less than 10 W = Withheld to avoid disclosure

(a) Tonopah, Round Mountain and Gabbs townships (northern Nye County).
(b) Developed from U.S. 1972 Census of Selected Service Income.
(c) Developed from projected average industry employee data.
(d) Percentage of Nye County Employment by Sector in northern Nye County.

Data Sources: Same as Table 15.

Table 17

BATTLE MOUNTAIN DISTRICT STATISTICAL REGION POPULATION ESTIMATES AND COMPONENTS OF CHANGE BY COUNTY AND D.S.R. 1960, 1970, 1973 AND 1974

POPULATION

	1960 1/	Percent Change	1970 2/	1973 4/	1974 3/ (Provisional)	Components of Change 5/ 1970 - 1973 Births	Deaths	Net Migration Number	Percent
Nye	4,374	28	5,599	5,030	4,800	200	200	-600	-10.9
Beatty & Pahrump	1,153	88	2,172						
North Nye	3,221	3	3,327						
Percent Change 1970 - 1974					-14%				
Battle Mountain D.S.R.	6,707		9,213	8,527	8,664	400+	300+	-900	- 9.7
Percent Change		37							
Nevada	285,278		488,738	548,000	583,563	30,000	13,000	42,000	8.6
Percent Change		71							

Reference Sources:

1/ U.S. Bureau of the Census, U.S. Census of Population: 1960 Number of Immigrants, Nevada, Final Report PC (1)-20A U.S.G.P.O. Wash. D.C. 1973 (9553)

2/ U.S. Bureau of the Census, U.S. Census of Population: 1970 Number of Immigrants, Final Report PC (1) A 30 Nevada U.S.G.P.O. Wash., D.C. 1971 (9553)

3/ Chu, Shi-Fan, Nevada Population by Counties, B.B.E.R., UNR, Reno, November, 1974.

4/ U.S. Bureau of the Census, Current Population Reports: Population Estimates and Projections, Series P-25, No. 573, March 1975 (9553)

5/ U.S. Bureau of the Census, Estimates of the Population of Nevada Counties: July 1, 1972 and 1973, Federal-State Co-op - Program for Local Population Estimates.

Table 18

MONEY INCOME STATUS OF NYE COUNTY, BATTLE MOUNTAIN DISTRICT STATISTICAL REGION AND NEVADA RESIDENTS, SELECTED YEARS

	Per Capita Income of Persons (1)	Per Capita Income Relative to U.S. (2)		Per Capita Income		Median Effective Buying Income (3)
		Index U.S. = 100				
	1969	1950	1972	1972	1973	1974
Nye	3,844	80	71	3,912	4,029	11,086
District Statistical Region	3,365	NA	NA	4,340	4,879	NA
Nevada	6,749	NA	NA	5,211	5,712	13,517

Reference Sources:

(1). U.S. Bureau of Census, Census of Population: 1970 General Social and Economic Characteristics, Final Report PC-91-C30 Nevada, U.S.G.P.O., Washington, D.C., 1972.

(2). U.S. Department of Commerce, "Local Area Personal Income", Survey of Business, Par II, May 1974, pp.72-73.

(3). "1975 Survey of Buying Power", Sales Management, July 21, 1975, page D-66.

B. Significance of Social Well-being

The following table (Table 19) is intended as a method of comparing the State with the County and the Resource Area on the basis of quantitatively measurable indicators. These indicators are examined to determine if the county or planning area is statistically different from the State. A statistically different indicator, whether the sign is positive or negative, does not connotate good or bad, but must be examined in the light of community social goals and desires.

Table 19

SIGNIFICANCE OF SOCIAL WELL-BEING

Well-Being Factors	State (a)	Nye County (b)	Tonopah Resource Area (c)	Percent Difference (d)
1. Population Change (average annual rate of change:)				(b-a) ÷ a = -55 (c-a) ÷ b = -87
1960 - 1970	5.5%	2.5%	0.32%	(c-a) ÷ a = -94
1970 - 1974	4.5%	-3.8%	NA	(b-a) ÷ b = -184**
2. Per Capita Income (1973)	5,712	4,029	NA	(b-a) ÷ a = -29**
3. Migration pattern as an indicator of employment opportunity (1970 - 1973)	+8.6%	-10.9%	NA	-227**
4. Unemployment Rate (FY 1974)	7.6%	6.3%	NA	-17
5. Per Capita Property Tax Collection for:				
(a) Schools	103	155	NA	(b-a) ÷ a = +50*
(b) County	67	160	NA	(b-a) ÷ a = +139*
(c) Cities and towns	44	38	NA	(b-a) ÷ a = -14

* Moderately differs from state.
** Significantly differs from state.

NA Indicates that the data was not available.

C. Social Well-being Thrust Analysis

This section is intended to serve as a method of evaluating the ability of the lands, minerals, forest products, range, wildlife, and recreation programs to affect social well-being. These are evaluated along with the resident perception and will serve in part of the preparation of the Management Framework Plan by each resource specialist.

Table 20

SOCIAL WELL-BEING THRUST ANALYSIS

Resource Activity	Well-Being Factors	Resident Perceptions	Program Thrust Narrative
1. Lands	Population		Direct opportunities to accommodate or limit urban expansion; however, currently population pressure is minimal.
	Personal Income		Limited opportunity to transfer agricultural land without changed authority.
	Employment Opportunities		Lands actions for labor intensive uses will help to maintain existing populations.
	Unemployment Rate		Lower than state average.
	Per Capita Taxation for public Services	High tax rates.	Sanitary landfill opportunity, or public purpose transfer. Lands disposal may increase tax base; however need does not currently exist.
2. Minerals	Population Change		Under current mineral laws, there are program implications for only leasable and saleable minerals', however utilities and transportation rights-of-way to mines and mills may be granted with conditions providing that housing and public services for employee populations are provided by the developer.
	Unemployment Rate		Because of mining instability, problems of unemployment may be created in the longer terms.
	Per Capita Taxation for Services		(Refer to thrust for population, above).
3. Forest Products	Minor Impact	Regional Indian communities express opposition to commerical gathering of pinyon nuts.	Do not allow commerical nut harvesting permits.
4. Range Management	Population Change		Stabilizations of range conditions will improve income and employment opportunities for ranchers.
	Personal Income		Range improvements that increase production efficiency will increase per capita income.
	Unemployment Rate		No relation, unless modifications increase labor intensity.

Table 20
(cont.)

SOCIAL WELL-BEING THRUST ANALYSIS

Resource Activity	Well-Being Factors	Resident Perceptions	Program Thrust Narrative
4. Range Management (continued)	Per Capita Taxation for Public Services		No relation except through effect upon federal treasury.
5. Wildlife	Personal Income (from hunting expenditures)	Would like a larger game population.	May restrict livestock activities.
6. Recreation	Population Change	Visitors increase competition for desirable recreation sites. Merchants and service providers benefit.	Recreation facilities will serve (mostly) residents of Las Vegas and Reno metropolitan areas. Opportunities should be reserved that are not near existing local communities.
	Per Capita Taxation for Public Services		Development of recreation sites at local expense will exacerbate this problem without providing concomitant benefits. concomitant

.33 Record of Extent and Nature of Public Positions and Expectations

This section is intended to serve as a summary of documented public statements and attitudes towards the different facets of each resource activity and Bureau program. The information was gathered by researching Bureau files, newspaper clippings, group publications and the public participation record in the last Tonopah Management Framework Plan.

Table 21

RECORD OF EXTENT AND NATURE OF PUBLIC POSITIONS AND EXPECTATIONS

RESOURCE ACTIVITY LANDS

NAME OF GROUP	POSITION TOWARD LAND USE IN GENERAL	POSITION TOWARD RESOURCE ACTIVITY PRACTICES (FPR)	POSITION TOWARD SPECIFIC BLM LAND AREAS (FPR)	POSITION RELATED TO SPECIFIC RESOURCE PROJECT (EAR)
Bell Telephone	Communication lines should have rights-of-way to satisfy local demand.	None as long as it does not restrict communication.	None.	Overhead line rights-of-way desired. Communication lines desired. Underground rights-of-way desired.
Sierra Pacific Power Company	Power lines and power plants should be granted rights-of-way.	Should not restrict power supply.	Want to develop Hot Springs area.	Power line rights-of-way desired. Wants to obtain geothermal leasing.
Energy Research and Development Authority	Development of uses for atomic energy.	None.	Promote continued use of Morey Bench.	Authorize tests and security agreement.
Nevada Outdoor Recreation Association and Sierra Club	Support multiple use classification and opposes uses inconsistent with recreation.	Supports wildlife and recreation management.	Establish Morey Peak and Grants Range as primitive areas.	Oppose Kawich and Morey Peak communications sites. Oppose use of national resource lands as dump sites. Oppose use of off-vehicles. Oppose road rights-of-way.
Archaeological Society	Explore lands and establish and protect archaeological sites.	Protect sites from pot hunters and vandals.	Protect Morey Bench archaeological sites.	
Central Nevada Resource Development Authority	To promote and develop private land use in central Nevada.	Should support the development of private agricultural lands.	Favors development of Tonopah Resource Area.	Supports establishment of Tonopah office.

Table 21 (cont.)

RECORD OF EXTENT AND NATURE OF PUBLIC POSITIONS AND EXPECTATIONS

RESOURCE ACTIVITY MINERALS

NAME OF GROUP	POSITION TOWARD LAND USE IN GENERAL	POSITION TOWARD RESOURCE ACTIVITY PRACTICES (PER)	POSITION TOWARD SPECIFIC BLM LAND AREAS (PRE)	POSITION RELATED TO SPECIFIC RESOURCE PROJECT (TAR)
Nevada Miners and Prospectors Association	Resources should be used to meet national and local needs.	Mining should not be restricted by conservation.	Opposes classification of Morey Peak and Grants Range as primitive areas.	Support power line rights-of-way. Support road rights-of-way. Should fence the highways.
Sierra Club	Restrict damage to land by mining and road development.	Suggest posting bond on prospectors to avoid land damage.	Protests establishment of mining ghost towns as recreation sites.	Supports Morey Peak and Grants Range primitive area classification proposal.
Nevada Archaeological Society	Prevent land use which destroys archaeological sites.	Oppose chainings and seedings which destroy sites.	Support preservation of mining ghost towns. Want to perserve Morey Bench.	Each resource project should be archaeologically cleared before mining.

Table 21 (cont.)

RECORD OF EXTENT AND NATURE OF PUBLIC POSITIONS AND EXPECTATIONS

RESOURCE ACTIVITY RANGE MANAGEMENT

NAME OF GROUP	POSITION TOWARD LAND USE IN GENERAL	POSITION TOWARD RESOURCE ACTIVITY PRACTICES (PPR)	POSITION TOWARD SPECIFIC BLM LAND AREAS (PPR)	POSITION RELATED TO SPECIFIC RESOURCE PROJECT (EAR)
Ranchers	Resource use should continue as in the past.	Oppose changes in AUMs and Allotment Management Plans, which would change grazing practices.	Want most horses removed from Stone Cabin Valley.	Fences requested in some cases. Cattleguards requested. Pipelines for water requested. Spring development requested. Wild horse removal requested.
University of Nevada Extension Service	To promote education and extension among agriculturists and promote scientific range management.	Should institute rest rotation grazing.	Should fence Stone Cabin Valley in order to institute proper range management practices.	Should control wild horses.
Natural Resource Defense Council, Inc.	To protect the environment from destruction.	Want grazing plans changed to protect resource.	Want better grazing practices in Stone Cabin Valley and other badly overgrazed areas.	BLM must prepare EIS on grazing; joined by NCRA in suit against Department of Interior.
Wild Horse Groups	To preserve wild horses on the range.	Want wild horses considered in AMPs.	Want some horses left in Stone Cabin Valley.	Support humane treatment of wild horse problem.
Sierra Club	To preserve the resource and the environment.	Protest chainings and seedings.	Want Blue Eagle Mountain area withdrawn from grazing.	Oppose existing MFPs and AMPs because of overgrazing.

Table 21 (cont.)

RECORD OF EXTENT AND NATURE OF PUBLIC POSITIONS AND EXPECTATIONS

RESOURCE ACTIVITY WILDLIFE

NAME OF GROUP	POSITION TOWARD LAND USE IN GENERAL	POSITION TOWARD RESOURCE ACTIVITY PRACTICES (PPR)	POSITION TOWARD SPECIFIC BLM LAND AREAS (PPR)	POSITION RELATED TO SPECIFIC RESOURCE PROJECT (EAR)
Wild Horse Organized Assistance and National Wild Horse Association	Believe that wild and free roaming horses should be allowed freedom of range.	Resource use should allow for wild horses.	Feel horses should be protected in Stone Cabin Valley.	Removal of wild horses from Stone Cabin Valley - coordination and cooperation.
Sierra Club	To preserve and protect the environment.	Should protect and encourage wildlife in area.	Restrict hunters in Grants Range, protect Big Horn on Blue Eagle Mountain.	Interested in establishing wild horses viewing areas. Support wildlife improvement areas.
Tonopah Sportsmen	Hunting and fishing should be promoted.	Feel Nevada Dept. of Fish and Game is better qualified.	Favor maintenance of Morey Bench deer winter range.	Support wildlife improvement plans. Not in favor of Organic Act. Do not like fences.
Ranchers	Land use should primarily be for livestock.	Steps should be taken to improve number of game.	Most horses should be removed from Stone Cabin Valley.	Support wild horse removal. Support predator control.
The Wildlife Society	Dedicated to management and conservation of wildlife resources.	Encourage protection of endangered species.	Preserve Morey Bench deer winter range and Railroad Valley.	Support humane treatment towards wild horses. Support wildlife habitat improvement schemes.
Audubon Society	Preservation of birds and wild fowl and wildlife.	Protection of hawks and eagles.	Preservation of Railroad Valley Wildlife Management Area.	Support wild fowl habitat improvement plans.

Table 21 (cont.)

RECORD OF EXTENT AND NATURE OF PUBLIC POSITIONS AND EXPECTATIONS

RESOURCE ACTIVITY RECREATION

NAME OF GROUP	POSITION TOWARD LAND USE IN GENERAL	POSITION TOWARD RESOURCE ACTIVITY PRACTICES (PPR)	POSITION TOWARD SPECIFIC BLM LAND AREAS (PPR)	POSITION RELATED TO SPECIFIC RESOURCE PROJECT (EAR)
Nevada Outdoor Recreation Association	To promote recreation and to conserve the environment.	Should encourage non-exploitative recreation uses.	Primitive areas should be established.	Oppose identification of archeological sites to potential pot hunters and vandals.
Sierra Club	Conserve the land, its animals and plants while encouraging non-exploitative recreation.	Recreation sites should not be developed which further degrade primitive and historical sites.	Establishment of primitive areas at Morey Peak and Grants Range.	Proposed cooperation with U.S. Forest Service on sign program on old mining camps.
Tonopah Sportsmen	To promote hunting and fishing.	Oppose off-road vehicle restriction. Oppose out-of-state hunter use.	Leave Morey Peak, Grants Range and Blue Eagle areas alone.	Feel the Nevada Dept. of Fish and Game is better qualified to handle game. Approve road rights-of-way as soon as possible.
Tonopah Lions Club	To promote development of Tonopah and recreation in general.	Support establishment of primitive areas. Improve lake and reservoir fishing.	Should develop Cresent Sand Dunes for recreation.	Support off-road vehicle use. Energy Research and Development Authority blast areas should revert to public use.
Ranchers	Land use should primarily be for livestock.	Protest deleting AUMs from livestock to wildlife.	Protest establishment of Morey Peak and Grants Range primitive areas.	Protest use of recreation sites that restrict grazing. Protest game improvement schemes that restrict grazing.

.4 Infrastructures and Bureau Relationships

.41 Information

A. Infrastructures

B. Agreements

C. Relationships

D. Non-Federal Law

All these topics were covered in depth in the Battle Mountain District Socio-Economic Profile (1606), and it is not the purpose of this document to redisplay information contained elsewhere in the planning process.

An index is attached which displays a summary of infrastructures, agreements, and relationships. Also displayed are the resource activities which they impact, or which affect the infrastructures or relationships.

Table 22
Special Activity Reference

Data Source Index	Data in Socio-Economic Profile	Lands	Minerals	Forestry	Range	Watershed	Wildlife	Recreation	Cadastral Survey	Roads and Trails	Fire Control	Atrow	Other	
Transportation	.44A	X						X		X	X	X		
Communication	.44A	X								X	X	X		
Fire Control	.44E													
Land Survey	.44C	X	X						X					
Major Utilities	.44D	X				X		X			X	X		
Law Enforcement	.44E						X	X			X			
Search and Rescue	.44E							X			X			
Health Systems	.45A							X						
Education	.45B						X				X			
Special Districts	.46	X												
Water Systems	.44D	X				X						X		
Nye County Planning Commission	.52	X						X		X				
Other Federal														
Bureau of Reclamation			X		X									Stock driveways.
USDA Forest Service		X	X	X	X	X	X	X	X	X	X	X		
Fish and Wildlife Service							X	X						
Bureau of Indian Affairs					X							X		Understanding for security.
Energy Research and Development Authority														

Table 22 (Cont.)
Special Activity Reference

Data Source Index	Data in Socio-Economic Profile	Lands	Minerals	Forestry	Range	Watershed	Wildlife	Recreation	Cadastral Survey	Roads and Trails	Fire Control	Arrow	Other	
Soil Conservation Service		X			X	X	X		X	X				
Federal Aviation Administration		X								X		X		
U.S. Geological Survey			X											
Other BLM Districts														Saval allotment.
Winnemucca											X			Stewart Spring
Carson											X			allotment.
Elko											X			
Ely											X			
Las Vegas											X			
State Agency														
Nevada Highway Department		X										X		Sign erection.
University of Nevada		X	X	X	X	X	X	X						
Division of Forestry				X			X	X			X			
Fish and Game		X			X	X	X			X				
State Museum		X							X					Archaeology.
State Engineers Office						x		x						

Table 22 (Cont.)
Special Activity Reference

Action Study Interest Groups	Data Source Index	Data in Socio-Economic Profile	Lands	Minerals	Forestry	Range	Watershed	Wildlife	Recreation	Cadastral Survey	Roads and Trails	Fire Control	Arrow	Other
CNRDA			X			X	X			X	X		X	
Southern Pacific Land Corporation			X								X		X	
Southwest Gas			X								X		X	
Sierra Pacific Power			X								X		X	
Bell of Nevada			X								X		X	
Sierra Club					X	X	X	X	X		X	X		
Nevada Prospectors Association				X							X			
National Mustang Association								X						
Nevada Outdoor Recreation Association					X	X	X	X	X		X			
Wild Horse Organized Assistance								X						
Nevada Cattlemens Association						X	X	X						
Nevada Sheepherders Association						X	X	X						
Tonopah Sportmens Association							X	X						

.42 Further Analysis of Institutional Relationships

The following tables document an analysis of the agreements between the Bureau of Land Management and other Federal, State, and local government agencies. The impacts are considered from the viewpoint of requirements obligated upon Battle Mountain Bureau of Land Management activities in the Tonopah Resource Area.

Attached is an extract from the Socio-Economic Profile which lists Battle Mountain Bureau of Land Management relationships.

TABLE 23

RECORD OF BUREAU RELATIONSHIPS AND

THEIR IMPACT ON NATIONAL RESOURCE LAND MANAGEMENT

Agency/Group	Agreement	Impact Documentation
1. Bureau of Reclamation	Geothermal Leasing	a. Minerals Survey Leasing
		b. Impact of Agreement Requires Review by Bureau of Reclamation Before Leasing in Areas Affecting Bureau of Reclamation
	Watershed Projects	a. Watershed (All aspects)
		b. Impact requires consultation before any project affecting B. of R. Projects
		c. Impact on other activities Range Management Projects Wildlife Projects
2. USDA Forest Service	Archaeological Clearance	a. Archaeology Clearance
		b. Impact-Requires BLM Clearance Before Any BLM projects on USFS Land
	Fire Protection	a. Fire Protection Suppression Control
		b. Impact-Requires initial attack and cooperation in designated areas
	Road, Power line Rights-of-way	a. Lands Easements
		b. Impact-Requires easements and cooperation between agencies

TABLE 23 (CONT.)

RECORD OF BUREAU RELATIONSHIPS AND

THEIR IMPACT ON NATIONAL RESOURCE LAND MANAGEMENT

Agency/Group	Agreement	Impact Documentation
2. USDA Forest Service (continued)	Range Management	a. Range Management Stock Control Water b. Requires BLM to use USFS Regulations in building fences & pipelines on USFS Lands
	Forest Protection	a. Forest Products Insect Control Disease control Survey b. Requires BLM to conduct surveys and coordinate and cooperate in insect disease control
3. USDA Forest Service. Fish and Game, Soil Conservation Service, Agricultural Extension Service	Reservoir	a. Watershed Water Control b. Requires that any reservoir built be large enough for fish and provide access for recreation. c. Impact on other activities Range Management Wildlife Recreation
4. Bureau of Sport Fisheries	Railroad Valley Wildlife Area	a. Range Management Livestock Control b. Impact-Requires BLM to manage livestock on Railroad Valley Wildlife Area c. Wildlife
	Predator Control	a. Wildlife Predator Control b. Impact-Requires BLM to administer and control predator control programs

TABLE 23 (CONT.)

RECORD OF BUREAU RELATIONSHIPS AND

THEIR IMPACT ON NATIONAL RESOURCE LAND MANAGEMENT

Agency/Group	Agreement	Impact Documentation
5. Tonopah Soil Conservation District	Soil Conservation	a. Watershed all aspects b. Impact-Requires BLM to prepare a long range plan and to prepare water shed conservation projects. c. Range Management
6. Bureau of Indian Affairs	Fire Control	a. Fire control Control suppression b. BLM is required to suppress and control all fires on National Indian Affairs Lands
7. Federal Aviation Administration	Easements	a. Lands Easements b. Requires BLM to prepare easements for FAA roads and installations.
8. U.S. Geological Survey	Leasable Minerals	a. Minerals Survey Leasing Preparation of EAR b. BLM must examine site and prepare EAR before leasing and must administer lease c. All other activities are impacted by EAR
	Geothermal Leasing	a. Minerals Survey Leasing Preparation of EAR b. BLM must examine site and prepare EAR before leasing and must administer lease.

TABLE 23 (CONT.)

RECORD OF BUREAU RELATIONSHIPS AND

THEIR IMPACT ON NATIONAL RESOURCE LAND MANAGEMENT

Agency/Group	Agreement	Impact Documentation
8. U.S. Geological Survey (continued)		c. All other activities are impacted by EAR
9. Ely and Las Vegas BLM Districts	Fire Protection	a. Fire Control Initial attack Cooperation b. Battle Mountain BLM must provide attack in designated zones and must cooperate in suppression and control
10. Nevada Highway Dept.	Material Sites	a. Minerals Saleables b. BLM must review applicatio for material sites and formulate requirements fo clean up.
	Rights-of-way	a. lands Rights-of-way b. BLM must prepare rights-of way for Highways on national resource lands
11. Nellis Air Force Base	Wild Horse Range	a. Range Management Wild Horses b. BLM must provide inventory control and coordination in managing range and wild horse population c. Wildlife
12. Nevada Department of Agriculture	Wild Horses	a. Range management Wild Horses b. BLM must comply with State Lands concerning brands and inspections.

TABLE 23 (CONT.)

RECORD OF BUREAU RELATIONSHIPS AND

THEIR IMPACT ON NATIONAL RESOURCE LAND MANAGEMENT

Agency/Group	Agreement	Impact Documentation
13. Nevada Division of Forestry	Fire Protection	a. Fire Control Cooperation b. BLM must provide all assistance and cooperation in control and suppression of fires on Nevada forest land.
14. Nevada Department of Fish and Game	Sikes Act (1974)	a. Wildlife all aspects b. Manage livestock, habitat rehabilitation, implement wildlife conservation protect habitat for endangered species, enforce regulations on ORV traffic
15. Nevada State Museum	Archaeology	a. Archaeology All aspects b. BLM must furnish land status information on archaeological sites, advise of land treatment programs, recommend priorities, and advise on restoration and include prospective sites in a comprehensive inventory.

TABLE 24
COOPERATIVE AGREEMENTS WITH
OTHER FEDERAL, STATE AND LOCAL AGENCIES

Cooperative Relations Item		BLM Reference No. 1786 Location: Central Files
1. Bureau of Reclamation	1972 A.	Administrative Agreement
	1960 B.	Stock Driveways
	1971 C.	Geothermal Leasing
2. U.S.D.A. Forest Service	1954 A.	Road Right-of-Way
	1966 B.	Range Management
	1961 C.	Forest Control
	1943 D.	Fire Protection
3. U.S. Fish & Wildlife Service	A.	Wildlife Consideration
	B.	Predator Control
	C.	Railroad Valley Preserve
4. Bureau of Indian Affairs	A.	Range Management
	1971 B.	Fire Protection
5. Energy Research and Development Administration		Understanding for Security
6. Soil Conservation Service	A.	Coordination on Water and Survey
	B.	Cooperation
7. Soil Conservation Districts		Cooperation
Eureka		Cooperation
Austin		Cooperation
Humboldt River		Cooperation
Tonopah		Cooperation
8. Federal Aviation Administration		Road and Radio Site Use.
9. U.S. Geological Survey	1971 1.	Minerals Administration
	1974 2.	Geothermal Leasing
Other BLM Districts		
10. Winnemucca District	A.	Fire Protection
	B.	Saval Allotment
11. Carson District	A.	Stewart Spring Allotment Fire Protection
12. Elko District		Fire Protection
13. Ely District	A.	Fire Protection
14. Las Vegas District		Fire Protection

TABLE 24 (CONT.)
COOPERATIVE AGREEMENTS WITH
OTHER FEDERAL, STATE AND LOCAL AGENCIES

State Agency	
15. Nevada Highway Dept.	A. Material Sight Cleanup B. Sign Erection C. Right-of-Way
16. University of Nevada	A. Test Inclosures B. Water
17. State of Nevada Clearinghouse	Information & Publication
18. Nevada Division of Forestry	Air Protections
19. Nevada Fish & Game	A. Wildlife Consideration B. Water Developments C. Range Improvements
20. Nevada State Museum	Archaeology
21. State Engineers Office	Nevada Water Laws
County	
22. Lander County Planning Commission	Cooperation
23. Lander County Schools	Cooperation
24. Eureka County Planning Board	Cooperation
25. Eureka County Commissioners	Roads and material sights
26. Nye County Planning Commission	Cooperation
Planning Agencies	
27. Central Nevada Resource	Cooperation
28. Nevada Resource Action Council	Cooperation
29. Nevada State Land Use Planning Agency	Cooperation
30. Southern Pacific Land Corp.	A. Exchange of Use B. Christmas Trees
31. Southwest Gas	Use Rates
32. Sierra Pacific Power	Right-of-Way
33. Bell of Nevada	Right-of-Way

TABLE 24 (CONT.)
COOPERATIVE AGREEMENTS WITH
OTHER FEDERAL, STATE AND LOCAL AGENCIES

Private Groups of Interest	
34. Sierra Club	A. Recreation B. Conservation
35. Nevada Prospectors Association	Minerals
36. National Mustang Association	Wild Horses
37. Nevada Outdoor Recreation Association	Recreation
38. Wild Horse Org. Assistance	Wild Horses
39. Nevada Cattlemen's Association	Livestock
40. Nevada Sheepherders Association	Livestock
41. Tonopah Sportmens Association	Recreation
42. District Advisory Board	Grazing Administration

Cooperative Planning Item	BLM Reference: No. 700 Location: Library.

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5. Critical Environmental Area Analysis

There have been no officially designated critical environmental areas in the resource area. The Environmental Protection Commission of the Nevada State Department of Conservation and Natural Resources has not formally nominated any area as an area of concern.

However, some areas were suggested by Nevada residents that are within the Tonopah Resource Area. They were suggested because of their scenic, historic, recreational, or scientific values.

	Site	Value
1.	Morey Peak	Scenic
2.	Belmont Townsite	Historic
3.	Ophir Townsite	Historic
4.	Twin Rivers	Recreational-Scenic
5.	Ichthyosaur State Park	Scientific
6.	Tybo and other ghost towns	Historic

These areas were also identified in the Unit Resource Analysis by the Bureau of Land Management.

6. Problems and Issues Summary

The problems and issues identified by the resource activities have been listed in the following index.

Problems were analyzed from a social, economic and resource viewpoint. Problems were also organized by multi-activity, single activity and by organizational units required to resolve the problem or issue; i.e., district, multi-district, outside BLM.

This is because district concerns can be handled within the district, while multi-district concerns will require multi-district cooperation. Outside district concerns require coordination outside the Bureau of Land Management. Single activity concerns can be handled within individual resource activities.

TABLE 25
PROBLEMS AND ISSUES SUMMARY

Problems/Issues	Social	Economic	Resource	Remarks
General Significance District				
1. Hazards on national resource lands.	Risk to personal safety.	a. Lawsuits. b. Costs of elimination.	Aesthetics.	a. Elimination leads to disturbance of historic sites. b. Legal problems in ownership.
2. Demand by livestock, wild horses, wildlife and watershed protection for forage in excess of actual production.	Deterioration of ranching life style and local life style.	Declining long term yield to livestock and recreation.	a. Excessive use of vegetative resources. b. Pressure on wildlife and watershed.	Lack of coordination with other wildlife management agencies.
3. Lack of effective vegetative management by BLM and ranchers.	Political and social pressure for status quo.	a. Costs of implementation. b. Output is less than potential.	Environmental damage.	Lack of coordination with other land use agencies.
4. Projected agricultural development of 23,000 acres.	Lack of agricultural farm infrastructure.	a. Capital is not sufficient. b. Input - output market is insufficient.	Erosion, weed invasion, destruction of historical sites.	Desert Land Entry is insufficient.

TABLE 25 (CONT.)
PROBLEMS AND ISSUES SUMMARY

Problems/Issues	Social	Economic	Resource	Remarks
Multi-District				
5. Bombing range (lack of coordinated surface management).	Political problems.	Restricts mining and agricultural development.	Restricts wildlife and range management.	Lack of coordination with Air Force and Fish and Game.
6. Need for management location and limitation of utility corridors.	Social pressure for utilities (local and national).	Economic pressure for utilities.	Possible aesthetic and environmental damage.	
7. Control of water on national resource land.	Social pressure, quality and quantity.	Competition for use.	Competition between all resources.	Legal ownership problems.
8. Problems in BLM's relationship with the population.	Poor public perception of BLM's goals and objectives.	Funding for programs.	Hinders resource management.	Attempts to please everybody.
9. Low per capita income in the Resource Area.	Lack of social services.	Low spending. Slow Growth. Low tax base.	Encourages short term exploitative uses.	
10. Rapid growth in mining activity.	Limited infrastructure to accommodate population growth.	Positive growth in income. Negative instability of minerals market.	Damage to environment. Water quality and quantity.	Lack of control (except rights-of-way.

TABLE 25 (CONT.)
PROBLEMS AND ISSUES SUMMARY

Problems/Issues	Social	Economic	Resource	Remarks
Single Activity				
11. Loss of wildlife habitat.	a. Deterioration of recreational opportunities. b. Public concern for wildlife.	Loss of income from hunting and fishing.	Destruction of wildlife and forage.	Lack of coordination with other wildlife agencies.
12. Preservation of 63 historical and 49 cultural sites.	Local and regional concern. Opposition by artifact collectors.	Loss of recreation based income. Cost problems.	Maintenance of hazards (mining towns).	Legal problems with ownership.
13. Current and projected demand for recreation opportunity.	a. Changes in small town life-style. b. Urban resident need.	Increases in local service sector.	Environmental damage. Health hazards.	Impacts on land-use patterns.

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